THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XLVII. SATURDAY, SEPTEMBER 5, 1885. NO. 10.

ORIGINAL LECTURES.

AMENORRHŒA.

A Clinical Lecture delivered at the Long Island College Hospital.

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(Reported by Edward Develin, M.D.)

GENTLEMEN: To-day I shall take up the subject of amenorrhœa and discuss fully the etiology of this difficulty, illustrating the same with some cases of extreme interest and value to us.

In organic diseases, especially those of the liver, heart, lungs, or kidneys, in the advanced stages, we may look for derangements of menstruation. Those of you who have studied the pathology of these organs know that if there be an obstruction to the return circulation, from hepatic disease, for example, passive hyperæmia ensues, and if long continued tends to produce degenerative action. Hence, we find what is termed secondary degeneration of the pelvic organs arising from organic disease of the liver. We also find the same state arising from valvular lesions of the heart; the result is, of course, produced indirectly, but, nevertheless, the organic disease is the primary cause and starting point of this derangement of the menstrual function, which may be either menorrhagia or amenorrhœa; and a careful study of the lesions of the circulatory system cannot fail to show you how this comes to pass.

It is, however, not so easy to state why Bright's disease of the kidneys should produce derangements of menstruation. Amenorrhœa is naturally a consequence of hepatic or heart affections, but in renal disease the pathology is not as easy of explanation, as it is perhaps less mechanical than the former. I presume in amenorrhœa occurring from renal disease, that it is due more to malnutrition, tissue deterioration, and anæmia. The point, however, to which I specially call attention is the necessity for us to look well to the general organization in obscure cases, and seek there the causes of amenorrhœa, rather than in the pelvic organs themselves.

In support of this I will briefly relate a case that came under my observation. A lady suffering from menorrhagia called upon one of our distinguished gynecologists in New York, for consultation as to her condition. His attention was entirely directed to the pelvic organs. He used every means at his command, including frequent curetting of the uterus, but the menorrhagia still continued. One day she died very suddenly, and the post mortem revealed marked cardiac disease, this being the cause of her death. The uterus was perfectly normal, except some evidence of a passive hyperæmia, occurring as I have previously stated. Had this gentleman for a time forgotten his special department and taken a broader view of his case, he would at once have seen that it was due to cardiac disease. I mention this here in order that others may not fall into the same error. Therefore, if you do not find any well-defined local cause for the derangement of menstruation, look to the organs of nutrition.

I would now call your attention to the management of amenorrhœa in chlorotic patients. This condition, known as chlorosis, presents that peculiar form of organization in which we have a partial arrest of the development of the circulatory apparatus and sexual system.

The consequence arising from this insufficient development is that amenorrhœa is the rule, as is also anæmia. In chlorosis especially, the blood-making organs are sluggish and defective, and while the patient appears healthy, apparently, owing to the amount of adipose tissue observable in this condition, the heart action is feeble and easily gives out; they become tired easily on the least exertion. Such individuals cannot afford to menstruate, although they may do so under ordinary circumstances. But the moment you put a tax upon the system by which their vitality is used up in other channels, they become very anæmic, and amenorrhœa follows.

You will also find that these patients do not respond well to restoratives and tonics, as will any well-developed organization that is simply suffering from anæmia for the time being, because of this peculiarity of organization which I have just described. You give them iron and good nourishing diet, and they improve so slowly and fall back so often that you become almost discouraged. In these cases of chlorosis you will find the alterative tonics effect by far the most satisfactory results. Until I adopted this plan of treatment I made but slow progress in my treatment of chlorosis. You can, of course, never change the organization, or make a well-developed, ruddy, vigorous woman of such a patient; but you can regulate their digestion so that assimilation is greatly improved, and a fair condition of health maintained. In these cases you will find iodine, in the form of iodide of iron, answers well; this, however, is better in the strumous diathesis. In these cases of chlorosis we find that small doses of mercury is one of the best possible tonics. Now I know that I am taking a liberty when I mention mercury in small doses as a tonic. But we are indebted to Prof. Edward Keyes, of New York, for demonstrating that the actual number of red blood-corpuscles is increased by the administration of small doses of mercury in syphilis, and I think it has a similar effect in chlorosis. I know that if you give from one-thirtieth to one-fiftieth of a grain of the bichloride to a chlorotic patient three or four times daily, she will improve under the treatment, especially if you add the chloride of iron.

We must also remember that in the chlorotic girl the nervous system is below par, which would indicate the administration of the chloride of arsenic. Such patients are likely to be very dyspeptic, indicating a lack

of gastric juice, or its properties; hence, we administer hydrochloric acid. These remedies are contained in the mixture called "the four chlorides," viz., chloride of iron, chloride of arsenic, bichloride of mercury, and hydrochloric acid. Under this treatment it is surprising how these pale, greenish-yellow-looking girls will improve; but you must continue it for some time in order to obtain the best possible results.

Some may ask, "Are you not afraid to give one-fortieth of a grain of the bichloride of mercury for a long time?" I have given it for two months regularly, and then stopped for one or two weeks, and then again continued it for one month longer, without any bad effects whatever ensuing. I have also known it to be given for a longer period than that with most marked beneficial results.

In discussing this subject of amenorrhœa, I cannot impress upon you too strongly the recognition of this peculiar organization in those individuals known as chlorotic, because these often suffer from derangement of the menstrual function, and are more difficult to relieve than ordinary cases of amenorrhœa.

Case I.—I have here now a patient suffering from amenorrhœa, which will illustrate one or more points in regard to the relationship existing between the sexual system and the general organization when the reproductive function or reparative process is at fault. She has now reached her twenty-first year.

The question here arises, What is the cause of this amenorrhœa? The true meaning of the term, as you are aware, indicates the complete suspension of the function of menstruation. Let me say just here, that we are in the habit of taking some liberties with the term, as we sometimes say a patient is suffering from amenorrhœa when she is suffering from *scanty* menstruation. But the term means complete suppression of the menses; and in the patient before you we have this complete suppression.

She informs me that she commenced to menstruate when she was about sixteen years of age; at that time she was living in Ireland; she left her native country just six months ago. She has five sisters and three brothers, all of whom, she says, are apparently healthy. The father is alive, but the mother died of consumption, as did also other members of her family, including some aunts and uncles. The patient furthermore informs me that she has always enjoyed good health, has not had any pain, and that her menstruations were perfectly normal until one month before leaving Ireland, when they failed to appear, and since that time she has never menstruated, but has suffered with a general decline of health.

Here we have sufficient clinical history to settle one or two points. You remember I said there were certain conditions necessary to normal menstruation. First, a good general condition of the body with efficient brain and nerve power. Second, sexual organs perfect in their development and function. We find in this case that we have had all of these conditions. I know from her clinical history that she is a woman who has had a generally good organization, and also that her sexual organs have been well developed and capable of performing their natural function. She is, as you observe, a little above the average size woman, and her general appearance is good; and a more important fact is, that she began to menstruate at the time of life which is natural to that climate. This function occurred regularly, and I have no doubt lasted the average period, and, I presume, presented its natural characteristics.

There is one important point to which I wish to draw your attention, and that is that she missed one menstrual period *before* leaving Ireland; at that time she did not suffer in any way; there was no pain, there was no cough. Her friends advised her to consult a physician before she left; others again said the sea voyage would probably cause the periods again to appear. The result, however, was that she left her home without consulting a physician. Now, had she menstruated regularly up to the time of her departure, and then ceased to menstruate upon her arrival here, it would not be at all surprising, as, if a sea voyage be made close to, or during, the menstrual period, there is often observed a suspension of this function for a time, especially if the individual suffer much from seasickness. But why, you ask, should this seasickness produce this result? Because it produced a deranged innervation with a peristalsis upwards; they have not sufficient force left to carry on the natural functions in other directions. Thus it is sometimes we find strong, healthy, vigorous-looking girls come to us suffering from this suppression of menses, having recently made a sea voyage; and we cannot find any cause but this seasickness to account for their abnormal condition. These, however, in time menstruate normally; they have no disease, no anæmia, or any displacement of the organs; there is nothing wrong with them except that this function has been arrested by seasickness. It is, therefore, in such cases one of the causes of amenorrhœa.

This may have been the cause here in the case before you, but if so, why has she not menstruated since she landed? Why did she cease to menstruate before she left Ireland? Her health, I fear, was failing before she left her home to come here. You can observe that she is anæmic, the color of her face, lips, and tongue tells you this; it may be, therefore, consequent upon some trouble that began before she left home, and has increased since she came here. Her pulse is weak, thready, and small; her appetite is very poor, and she states that she can go all day without eating food, and then has no desire for any. Her breathing also is short, and she is at present troubled very much with a cough, especially at night. We may find some malcondition of the nutritive system which may account for this, and upon examination we find an abnormality at the apex of the left lung, indicating plainly that the patient is suffering from phthisis. This, together with the history we have already obtained, points to this disease as the cause of her anæmia, cough, and fever, and resulting in the suppression of menstruation. Here, then, we have a condition of the general organization which accounts for her amenorrhœa.

Of course, as physicians, we have to think that the faulty organization is not the only cause; there might be other causes at work, causes which would be physiological, and would not require the services of the gynecologist, but rather the services of the obstetrician. The only peculiarity about her case is this: The rule is that amenorrhœa appears in the advanced stage of phthisis pulmonalis; when patients are in the third stage of the disease the menses become scanty, and

finally cease altogether. But there are exceptions, and this case now before you well illustrates such a one. Where amenorrhœa occurs in the first stage of phthisis it seems to come simultaneously with the lung trouble. In this case it is evidently conservative; a patient with marked degeneration of the lungs suffers from impairment of the whole nutritive system; she cannot then afford to menstruate. The system is below par, and there is a want of the reparative process of nature which has heretofore supplied and sustained the sexual organs in their natural functions; and thus nature herself reserves all her available forces in order to supply the system with the nutritive properties necessary to carry on the power of supporting life. We find, then, owing to this diseased condition of the body, that the function of appropriating nutriment for the sustenance of life is imperfectly carried on; and the products which have undergone a tissue metamorphosis are slowly used up, owing to the non-assimilation and non-appropriation of the nutriment supplied to the body; hence, we have this gradual emaciation, followed by exhaustion, until life itself is extinguished. In these cases of phthisis we then say we are glad when the function of menstruation is abandoned by nature, as in all probabillty the patient will live the longer. It may be, and I presume it is, conservative when this function is abandoned in the early stages of the disease, or when we have that condition of the system which tends to tuberculosis.

When we have an underlying tendency to disease, and when that tendency becomes or develops into actual disease, and amenorrhœa follows, it is then a conservative force. In these cases, then, we should be constantly on our guard; for you will find the relatives of your patient oftentimes insisting that if the doctor could only restore the menstrual flow the patient would be sure to recover. And should your patient die, you will perhaps find some who will still insist that her death was owing to lack of ability upon the part of the physician to restore the menstrual function. You may talk to them of inherited tendency; they will not know and will not care, they only know that she menstruated once, and why cannot you bring around the function as it used to be? These people will torment your life out almost by their persistent obstinacy and lack of reasoning power.

Now, if in the first place, upon the cessation of menstruation, you say to the relatives that it is conservative, and is an effort upon the part of nature to reserve her forces to meet the waste of other parts of the system, that your patient will live the longer for it, and that you are glad it has occurred, they will the more readily understand you, and place full reliance in you; tell them plainly that you do not desire her to menstruate.

In this case before us I have no hope of menstruation ever again occurring; her pulmonary difficulty will increase, as she has not the means and necessaries by which she can endeavor to arrest her malady. She cannot take proper care of herself; but whatever will relieve her lung trouble will tend to restore menstruation.

The cause here is organic disease of the respiratory organs, and until that is removed we can do nothing in the way of treatment for her amenorrhœa. I insist upon this, and cannot impress it upon you too strongly, as upon this subject the laity, you will find, will have a great deal to say. Again and again have I seen them insist that the amenorrhœa was the cause of the pulmonary difficulty; they would insist upon giving the patient hot foot-baths, hot drinks of all kinds, with decoctions of herb teas innumerable, in order, as they said, to establish menstruation.

This patient I will now hand over to Dr. Cushing, who will place her under good tonic treatment, with directions as to hygiene, etc.

Case II.—This young girl is seventeen years of age, and, like our previous case, is suffering from amenorrhœa. The cause of this condition we will at once proceed to investigate. She informs me that she commenced to menstruate when she was about sixteen years of age, and continued to do so for some five months. About six months ago she came to Dr. Cushing, six weeks having elapsed since her previous menstrual period.

To digress for a moment, I might here say that we can settle one question, namely, that of development. Here is a young girl who began her menstruation at the natural time of life, and continued to do so for some time, the function for some cause having then been arrested. This has shown us clearly that the organs have been fully developed; we can, therefore, exclude the non-development of the sexual organs as a cause for this amenorrhœa.

Since she has been under the care of a physician she has menstruated three times; this makes it once in every two months, and it is now some seven weeks since menstruation occurred. We have here, then, a case of retarded or interrupted menstruation.

When she was fifteen years of age she commenced to work in a paper factory, and has continued at factory work since that time. Now here we have a patient who has a fairly good organization; she is well developed and of quite the average size for her age. Here, then, we can not only exclude non-development of the sexual organs as a cause of her amenorrhœa, but we can also exclude that of general lack of development. We must, therefore, look for some cause intercurrent to account for her present condition. As she now is, she has quite a fresh color in her cheek, but this is principally owing to the excitement and nervousness induced upon appearing before so many medical men.

We must now take into consideration that early in life this girl had to work and earn her own living, working, perhaps, in an illy ventilated room with a number of other people where the air was foul and unwholesome from the crowding together of the occupants. She has, therefore, been placed under those conditions which derange the functions of life, her nutritive system having been in all probability taxed to its utmost. We find that in classifying the human family we cannot write the history of the human species as we can of those of birds and beasts, where the history of one represents the whole of that species. If you try this method with the human family, you will fail most signally. Just consider the difference between the conditions of any of the fashionably dressed and better class of ladies in our cities, and that of this girl who spends ten hours a day amidst the dust and oil of machinery, where, if you did not look closely, you would almost think she was part of the machinery, so

automatic do they become. Compare, I say, the histories of these two classes and you will say they do not belong to the same race. So then must we seek different causes as to this condition of amenorrhœa. In the latter case we have a human being overtaxed, poorly fed, and deprived of that greatest of necessities to good health, pure air. Is it then any wonder that in such a case we should find derangement of nutrition? This girl cannot afford to menstruate regularly although originally prepared to do so; she has not nerve-force and nutritive material to spare for this purpose; she has not the blood supply, although she has the organs ready to fulfil their part. Now, her physician has been trying to build up her health, and has partially succeeded in so doing, and would no doubt have done so much more quickly had she been able to leave her work and secure proper diet and exercise.

We then find that this girl is suffering from amenorrhœa from derangement of nutrition only and not from organic disease. Between these two points you can draw the difference, and thus discern the cause most readily. This case and the previous one are both alike in symptomatology: but the troubles arise from entirely different causes; one probably incurable and the other entirely curable.

Case III.—We have here a patient eighteen years of age. She comes to us to day with the statement that she has never menstruated, and desires to know the cause and place herself under treatment, in order that this function may be brought about.

The question in this case arises, Is this amenorrhœa due to retarded development, or is it due to malnutrition? She is certainly old enough to menstruate, so we can leave that out with perfect safety in seeking for the cause of her amenorrhœa.

She states that she has been compelled to go out and do housework in order to support herself ever since she was nine years of age; she has never been strong, being also somewhat small in size, but yet she has never had any serious sickness. Her appetite has not at any time been what would be called good. She has had nine brothers and sisters, three of whom are dead, she herself being next the youngest. Both parents are dead, but she cannot give the cause of death in either case.

A question here arises whether this retarded puberty be due to transmitted disease or the abnormal conditions of life by which she has been surrounded. Her general development indicates that she is big enough to menstruate, but there is an arrest of that special development which occurs at puberty, the breasts and sexual organs being undeveloped. Her parents, we have heard, died before she was old enough to take cognizance of the fact, and there have also occurred three other deaths in the family. It would, therefore, be fair to presume that her general organization as transmitted is not perfect. Her life and pursuits also have been hard from infancy up, which condition would also tend to retard her sexual development, the vital forces being used up in her daily avocations.

Here, then, we have a combination of conditions, either of which would tend to retard this development. The patient is very anæmic, as can be plainly seen, this condition probably being induced by her surroundings, and this, acting upon an organization which from the outset was illy qualified to carry on its natural functions, fully accounts for her amenorrhœa.

This girl then simply fails to menstruate because of this retarded development of the sexual organs. She has not had the vital energy sufficient to complete the secondary development of her sexual organs and at the same time attend to her daily labors.

Under these circumstances what shall we do? I presume that the sexual organs are not absent: we will, therefore, simply endeavor to change her conditions of life; let her do less work and do more for herself in the way of securing good nourishing diet and restorative tonics, and I have no doubt that if we can do this, her secondary development will follow, and that she will menstruate normally.

Now compare this treatment with that in vogue some years ago. The opinion then held by the laity and the profession as well, was that this amenorrhœa was the cause of the anæmia and ill-health of the patient. The treatment was then directed to establish or restore the menstrual function. This kind of practice was based upon the belief that, if this would be effected, a better condition of health would be the result, hence emmenagogues were used. We now know that the amenorrhœa is not the cause, but rather the effect of this anæmia and low condition of vitality. Instead, therefore, of dosing our patients with medicines to stimulate the pelvic organs, using hot foot-baths, etc., we now reverse the order of things and take the amenorrhœa as the consequence of ill-heath and leave the sexual system alone; knowing that we can only reach them through the nutritive system, and if we can succeed in building up the general health of the patient, the development of the sexual system will follow, and menstruation will appear in due time.

Case IV.—This patient that I now present to you came to me two years ago. She was then seventeen years of age and suffering from amenorrhœa. She was then, as now, undersized for her age; but since that time she has greatly improved, but as you can plainly observe, she is the subject of an arrest of general development.

Although seventeen years of age when she came to me, she had never menstruated and presented the appearance of a girl twelve years of age. She was born of perfectly healthy parents, but at the time that I saw her she was suffering from an acute disease of the liver. I am perfectly well acquainted with this child's history, as I have attended the family and know that there is transmitted disease in the case. This well illustrates the subject I have heretofore alluded to: I refer to organic disease being a cause of amenorrhœa; but in this case we have a chlorotic condition and retardation of development of the sexual organs, acting in conjunction with some disease of the abdominal viscera to bring about the derangement or menstruation. She has, of course, also as a natural result of the disease and chlorosis, become somewhat anæmic Now, although she is not at the present time a very robust or healthy looking girl, she has improved in her general condition and her anæmia is not so marked. She has also menstruated, but not perfectly; menstruation being irregular and failing in its usual characteristics. It is, however, a step in the right direction, and, in all proba-

bility, this function may be fully established if the treatment be continued.

At the time she first presented herself it was a question as to whether there might not be some transmitted specific taint; and because of that, it was suggested that specific treatment be adopted; but the family history and general appearance of the girl, overruled such an inference. She was therefore placed upon the mixture of the chlorides before mentioned, and I am pleased to show you the efficiency of the treatment. There was, however, in addition, quinine and iron administered, the vicinity in which she resided being somewhat of a malarial district, and she had previously suffered from this miasmatic affection. We will continue to give her the citrate of iron and quinine and the mixture of chlorides, alternating them.

Case V.—This patient is 40 years of age, and, like our previous case, is suffering from amenorrhœa. This one, however, is more on the descending line of life, while the other was but at the commencement. In all probability, therefore, we shall find that her amenorrhœa arises from a different cause. She informs me that she has been married for twenty years, and that she has borne three children. She further states that her menstruations were regular until eight months ago, when she contracted a severe cold from exposure and wetting of the feet; and, to make it still more severe, her menstrual flow had at that time just commenced, and was immediately checked owing to this cold and exposure. She complains, also, in addition to her amenorrhœa, of a severe cough, keeping her awake at night; shortness of breath, so much so that she can hardly walk up stairs; she has profuse expectoration; and her appetite is very poor; in fact, she is extremely weak and anæmic. We here see also a sign of what at one time was considered pathognomonic of phthisis. I allude to these curved finger-nails, which give a club-shape to them. This is stated even now by some to be a sign of tuberculosis, but I have very good reasons for believing that it may occur in other diseases as well as in tuberculosis; in fact, I am well satisfied in my own mind upon this point. Now, is this amenorrhœa due to organic disease of her nutritive system, or is it simply a premature menopause? It is certainly not uncommon for menstruation to cease at forty, for this function varies in different individuals. I have seen a case in which the menopause occurred at twenty-eight years of age, and cases have been reported at twenty-five years of age. On the other hand, I have met women in whom menstruation had been maintained beyond the fiftieth year; and in these various ages the individual has maintained a fair degree of health. Now, if this amenorrhœa in this patient is owing to a premature menopause, we need not be anxious about her, as it is then physiological. But we cannot rest here, as she has other symptoms which must be detrimental to health; I allude to her pulmonary difficulty. The doctor who has examined her has not been able to satisfy himself that she has tubercle of the lungs, although feeling convinced that a tendency to tuberculosis is the cause of her amenorrhœa; and, taken with her history, it appears to me more likely to be the cause than her age. As a rule, amenorrhœa always occurs in the advanced stage of phthisis, but it may occur in some at the outset or incipient stage of the disease, as in our first case. You will find in some cases that your patient will have amenorrhœa before she manifests any well-defined lung trouble; you will almost always find some evidence of commencing tuberculosis, but it may not be marked. Now why that is, I do not know: but I know it to be a fact that this suppression of the menses occasionally occurs in the early stages of pulmonary difficulty. Those having a well-marked tubercular diathesis are most liable to early suppression of the menses.

This is practical and important to know, for you will have patients brought to you suffering from amenorrhœa with no marked history of lung trouble; but, if you are careful in your examination, and secure a thorough history of the case, and go back a few years to her ancestors, you may perhaps find some trace of tuberculosis, and which has in all probability been transmitted, though the symptoms and signs be but illy defined in your patient. I remember a case very well which will illustrate this: A lady came to me one day, bringing her little girl with her to be treated for some throat affection. The following day she also brought an elder daughter, aged between 15 and 16. She drew my attention to her, saying that the girl was feeling quite well, but she did not know why she should have discontinued menstruation, and had begun to feel a little anxious about it; "but," said she, "I thought it might be because she was growing so fast, and that she would again menstruate in time." The mother, however, felt anxious about her, and desired my opinion. On examination, the girl to any would seem to be in good health; she certainly had all the general appearances of health; but there were some points that, to my mind, indicated a tubercular diathesis; and from her history I ascertained that such difficulty had been in the family. I candidly told the mother my opinion, expressing it that the girl would never menstruate. This amused her very much, as to her it seemed absurd. I then told her I did not think the girl would live until she was eighteen years old. I had, by a very careful examination, discovered a very small tubercular deposit at the apex of the left lung, but the patient had no cough. Taking this deposit in the lung, together with the amenorrhœa, I felt that the chances of life were very poor, indeed. I was fully justified in expressing my opinion, as I have just stated, in order that the mother might be fully aware of the serious nature of her daughter's malady. I was not consulted again by that family for some time after, when one day the mother called at my office and asked me whether I would not change my opinion regarding her daughter's case, although up to that time she had not menstruated. The mother then left, feeling somewhat indignant at what she thought an unfounded diagnosis, causing her needless alarm and anxiety. I then lost sight of her for some time, until one day she came to my office with the girl whom she had first brought to me. She then informed me that her elder daughter had died just after her seventeenth birthday. Such instances coming before us should, then, make us the more careful in searching for the causes of this amenorrhœa.

In the present case we will therefore direct our attention to the lung trouble, and leave the sexual organs alone. If this difficulty of the lungs can be overcome, I am well satisfied that menstruation will again become established.

ORIGINAL ARTICLES.

EXTRACT OF MALT.

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THE name "Extract of Malt," as applied to a pharmaceutical preparation found in the market, today, means nothing. I do not wish to insinuate that these preparations are not *extracts* of malt, for, I doubt not, they are in one sense; but as medicines, many of them are valueless, and others fall far short in the requirements necessary for that article. Many of them doubtless are made simply to sell; others to give a palatable flavor to medicines of disagreeable taste—and indeed if they are intended for any other purpose, they are certainly dismal failures, as their medicinal value is about equal to that of ordinary molasses; while the extract as prepared by other manufacturers is of excellent quality, and fulfils all the requirements.

Extract of malt is being quite generally prescribed at present by physicians; the primary object being to assist digestion, and as the medical profession, and the public generally are being imposed upon by the manufacturers of the many valueless preparations bearing this name, I propose to describe in this paper the nature, action, methods of preparation, and properties of a good extract, and also give the results of some comparative tests made with the most prominent brands which are in the market.

Extract of malt is, (or should be, as the name implies) prepared from malt or germinated barley, and it depends for its action on a soluble ferment, called *diastase*. This body has the property of converting starch into dextrine and malt sugar. Diastase does not exist in all parts of the germinated grain, being often absent in the radicles, and, generally most abundant near the plumule. It exists in the tubercles of the potato near the point of their insertion, but not in the roots or the shoots. It has also been found in the buds of Ailanthus glandulosa. Neither potatoes nor cereals contain diastase before germination. During germination the diastase is formed; its function being to convert the starch into a soluble form so as to admit of assimilation by the plant, and finally to convert it into dextrine and maltose (malt sugar). In the preparation of malt the growth of the sprout is interrupted by heating in a suitable furnace or kiln. It was noticed by Vauquelin in 1811 that starch, on being heated, was converted into a substance resembling gum arabic; and Kirchhoff, a little later, showed that by boiling starch with dilute sulphuric acid, a crystallizable sugar was formed; and very soon after, Vogel found that in the latter reaction, a gum-like body was also produced. In 1814 Kirchhoff showed that the gluten contained in wheat and other grain has the power of effecting a similar change on starch, and that malted grain is most active.

Payen and Persoz were the first to isolate the active principle of malt in 1833, and to this they gave the name of *diastase*, as they believed the action of this body to be a simple separation of starch from the granule. Some time before this the starch gum had been examined by Biot and Persoz, who gave it the name of *dextrine*, from its dextro-rotary power, supposing it to be the intermediate formed in the conversion of starch into sugar. In 1860, Musculus proved this view to be incorrect, and he showed that dextrine and sugar were formed at the same time. This fact was disputed until O'Sullivan proved the truth of Musculus's view, and also showed that the sugar which is first produced from starch, is not dextrose, as had been believed, but maltose.

In addition to diastase, two other ferments are found in plants,—emulsin and myrosin. The proportion of diastase in malt does not exceed 0.002 to 0.003 per cent.

Diastase is a white, amorphous, nitrogenous substance; insoluble in absolute alcohol, soluble in water and in weak alcohol. Its aqueous solution has no decided taste, and is neutral to test paper. Placed in contact with starch at 70° C., it quickly converts that substance by hydration into dextrine and maltose. According to Payen and Persoz, one part of diastase is sufficient to liquefy and convert into sugar 2000 parts of starch; while Strecker says one part of diastase will convert 100,000 parts of starch. Observers should bear in mind in making these quantitative tests that diastase prepared by alcoholic precipitation is a complex mixture into which the really active substance enters, perhaps, only in small proportion; also, that the presence of a certain quantity of sugar interferes with the transformation of dextrine, and in order to allow the action to resume it is only necessary to dilute with water, or remove the sugar by causing it to undergo alcoholic fermentation by means of yeast.

The aqueous solution of diastase readily decomposes, turning acid, and losing its power to convert starch; but if the solution contains a small quantity of alcohol it will keep indefinitely. Dry diastase is also likely to undergo slow decomposition. On boiling it with water the decomposition is instantaneous. Bouchardat says, that the action of diastase on starch is completely prevented by nitric, sulphuric, phosphoric, hydrochloric, oxalic, tartaric, or citric acid; also by caustic potash, soda or lime, sulphate and acetate of copper, mercuric chloride, nitrate of silver, alum, and ferric sulphate; also, that it is retarded more or less by formic acid, arsenious acid, magnesium, ammonium, and alkaline carbonates; slightly, also, by acetic acid, hydrocyanic acid, strychnia, quinia, morphia, and their salts. He finds no retarding influence exerted by essential oils, creasote, alcohol, and ether.

These statements of Bouchardat are of comparatively little value, as the influence of the above-named substances on the action of diastase depends, altogether, upon the proportion; as, for instance, it has been shown that a small quantity of hydrochloric acid greatly augments the action of diastase, while a larger quantity arrests it. The same may also be said of acetic and lactic acids.

The most satisfactory method for the extraction of diastase, appears to be that of Musculus, which is a modification of the process of Payen and Persoz. It is as follows: Take one part of germinated barley,

and after pulverizing, add it to two parts of water at 25° or 30° C. After an hour's maceration press out the liquid, and add an equal volume of alcohol at 80° C. After filtering to remove the rather voluminous precipitate, which is rejected, again add an equal volume of alcohol to the filtered liquid. Collect the very slight precipitate which is then formed, on a filter, and dry it on the filter at a very gentle heat. A diastase paper, which is very active, is obtained in this manner, and may be indefinitely kept without change.

It has been proved by more recent investigation that the chemical reaction of diastase on starch is more complicated than was formerly supposed; but if we regard only the original and final terms, we are apt to arrive at the conclusion that starch under the influence of diastase combines with itself the elements of water, and is converted into glucose; thus

$$\underset{\text{Amylaceous matter.}}{C_6H_{10}O_5} + \underset{\text{Water.}}{H_2O} = \underset{\text{Glucose.}}{C_6H_{12}O_6};$$

but this is not the case. According to O'Sullivan, the following equation represents the reaction when an infusion of malt has acted on starch-paste for from 5 to 10 minutes at 63° C.:

$$\underset{\text{Starch.}}{C_{18}H_{30}O_{15}} + \underset{\text{Water.}}{H_2O} = \underset{\text{Maltose.}}{C_{12}H_{22}O_{11}} + \underset{\text{Dextrine.}}{C_6H_{10}O_5}.$$

The presence of maltose is antagonistic to the action of diastase, and, according to Payen, the action of diastase continues until 51 per cent. of the starch is converted into a mixture of maltose and dextrine, and there it stops until the maltose has been removed. It has been shown by several investigators that on adding diastase to starch-paste heated to 70° C. that the reaction by means of iodine disappears as soon as the saccharification has affected a quarter of the starch; but the action of the diastase will continue, as has been stated, until one-half of the starch has been converted. Thus it will be seen that the iodine reaction fails as soon as a quantity of maltose equivalent to a quarter of the starch has been formed; and therefore this agent as ordinarily applied to determine the amount of diastastic action is only of value in comparative tests. The disappearance of the blue color in the iodine test when the starch is only partially converted, may possibly be accounted for by the development of complementary colors; the iodine with starch giving a blue color, and with dextrine a red, together with some yellow, which is always present.

If during the reaction the maltose is removed by alcoholic fermentation, the action of the diastase will continue, and finally all of the dextrine, as well as the starch, will be converted into maltose.

The activity of diastase depends greatly upon the temperature at which it is allowed to react upon starch. At about 65° C. it seems to be most active, and at about 95° C. it is entirely destroyed. It is held by some that diastase shows slight signs of activity even at 0° C. The proportion of maltose to dextrine formed depends much upon the temperature, and length of time the reaction is allowed to continue—according to O'Sullivan, at 63° C., and from 5 to 10 minutes reaction, the equation is as follows:

$$\underset{\text{Starch.}}{C_{18}H_{30}O_{15}} + \underset{\text{Water.}}{H_2O} = \underset{\text{Maltose.}}{C_{12}H_{22}O_{11}} + \underset{\text{Dextrine.}}{C_6H_{10}O_5};$$

or one molecule each of maltose and dextrine are formed; while at a temperature between 64° and 70° C., the following change occurs provided the mixture be quickly cooled after complete fluidity:

$$\underset{\text{Starch.}}{2C_{18}H_{30}O_{15}} + \underset{\text{Water.}}{H_2O} = \underset{\text{Maltose}}{C_{12}H_{22}O_{11}} + \underset{\text{Dextrine.}}{4C_6H_{10}O_5};$$

or one molecule of maltose to four molecules of dextrine. At temperatures near 95° C. he finds the decomposition to occur as follows:

$$\underset{\text{Starch.}}{4C_{18}H_{30}O_{15}} + \underset{\text{Water.}}{H_2O} = \underset{\text{Maltose.}}{C_{12}H_{22}O_{11}} + \underset{\text{Dextrine.}}{10C_6H_{10}O_5};$$

or one molecule of maltose to ten molecules of dextrine. The dextrine formed in each case will, on long-continued contact with diastase, finally be converted into maltose; but, as before stated, this action will be much more rapid if the maltose be removed by fermentation, or the solution be diluted.

Märker seems to have arrived at different conclusions regarding the nature of these changes, and has found that more maltose and less dextrine were produced at lower temperatures than at higher ones. By the use of yeast with diastase the whole of the starch is converted into maltose which in turn is split up into alcohol and carbonic acid.

In order to test the comparative value of the extracts of malt of the most prominent manufacture found in the market, I have made some tests on samples taken by myself from the shelves of retail drug stores, and I submit the following tabulated results:

NAME.	COLOR.	ODOR.	CONSISTENCY.	TIME FOR CONVERSION.
Forbes's Liquor Diastase	Light brownish-yellow	Malt	Mobile liquid	39 minutes.
Trommer's Extract of Malt	Dark reddish-yellow	Malt	Viscid liquid	60 minutes.
W. S. Merrell Chemical Co's Extract of Malt	Light brown	Malt-sweet	Viscid liquid	85 minutes.
Keasby & Mattison's Fluid Extract of Malt .	Brownish-red	Molasses	Viscid liquid	Incomplete conversion in 3 hours.
Maltine	Reddish-yellow	Malt	Viscid liquid	Apparently no action in 3 hours.
Hoff's Extract of Malt	Yellowish-red	Malt liquor	Mobile liquid	Apparently no action in 3 hours.
Liebig's Extract of Malt	Reddish-brown	Malt liquor	Mobile liquid	Apparently no action in 3 hours.
Shaker Extract of Malt	Brownish-red	Aromatic	Mobile liquid	Apparently no action in 3 hours.

The starch paste used was prepared by boiling thoroughly 60 grains of starch with 6 ounces of water, and allowing the mass to cool. The table shows the average of twenty assays with reference to the time required for the conversion of four parts of starch to one part of extract of 65° C. (150° F.).

The iodine solution used in testing the progress of the conversion of the starch, was made as follows:

Iodine	8 grains.
Potassium iodide . . .	16 "
Water	1 ounce.

Six drops of this mixture were diluted with two ounces of water for a working solution.

In testing the comparative convertive power of extracts of malt, a given quantity of each extract should be diluted with its own bulk of tepid water, and added to equal quantities of starch solution (prepared as above) at a temperature of 65° C (150° F.), and the mixture thoroughly stirred, and finally covered with a watch glass to prevent evaporation. The temperature is to be maintained at 65° C., and from time to time a drop of each mixture should be removed and tested with the iodine solution on a porcelain plate or watch glass, or in a small vial. The iodine solution with the starch will produce a deep blue color; but as the conversion of the starch progresses the color produced will vary, becoming purple, lilac, wine-red, and finally nearly colorless, which will complete the action.

It is essential that several precautions should be observed in performing these tests:

1. The iodine solution should not be stronger than that given in the above formula.

2. In comparative examinations of malt extracts, the whole amount of starch required should be gelatinized at one time, and the same should be used for all the samples. The starch liquid should be thin, and free from lumps.

3. An aqueous solution of iodide should be used, and should be freshly made. The presence of alcohol in considerable quantity will destroy the delicacy of the reaction with starch.

4. Samples of the mixture of extract and starch liquid undergoing conversion should be allowed to cool slightly before testing.

5. The mixture should be thoroughly stirred immediately after the addition of the extract.

6. Variation in temperature during conversion is to be avoided.

It will be noticed in the above table that the Forbes liquor diastase gave the best results, and was followed by Trommer's extract, after which came the W. S. Merrel & Co.'s malt. The remaining five extracts showing practically no diastastic properties, and, as far as their value in this direction is concerned, in two cases as much beer, and in the others an equal amount of molasses, would be of almost if not quite as much benefit to the consumer.

Some pharmacists appear to be ignorant of the requisites of extract of malt, and merely consider it an agreeable medium for the administration of repulsive medicines. Considering the methods which are recommended for its preparation, it is impossible to obtain anything but a thick molasses-like mass, with the diastase almost if not completely destroyed. The following is quoted from one of the late dispensatories:

"One part of ground barley is macerated for three hours with its own weight of water; 4 parts of water are then added, and the whole digested for an hour at 65° C., heated to the boiling point, and at once expressed and strained. The clear liquid is rapidly evaporated to the consistence of a thick extract."

By this it will be seen that most of the diastase will be used up in converting the starchy bodies present during the one hour digestion at 64° C., and the remainder will be destroyed by the subsequent boiling.

The latest editions of the dispensatories give the method recommended in the new U.S. Pharmacopœia, which is as follows:

"Malt in coarse powder, not finer than No. 12, 100 parts; water, a sufficient quantity. Upon the powder, contained in a suitable vessel, pour 100 parts of water, and macerate for six hours. Then add 400 parts of water, heated to 30° C., and digest for one hour at a temperature not exceeding 55° C.; strain the mixture with strong expression. Finally, by means of a water bath, or vacuum apparatus, at a temperature not exceeding 55° C., evaporate the strained liquid rapidly to the consistence of thick honey."

This method is a vast improvement over the old one, but still much of the diastase will be used up during the digestion at 55° C., and also during the evaporation, and the product will be an insipid mass possessing little diastatic activity. The aim seems to be to obtain an extract in the form of a thick sticky mass, while a thin liquid is much more palatable and more desirable in every way. Therefore why this long, tedious, and destructive evaporation! Is it simply to make it "keep?" If so, let a different method of preservation be adopted.

The method patented by Forbes in 1883 removes these difficulties and gives a product which fulfils all the requirements. It is as follows: Percolate or macerate (with subsequent expression) the malt, ground to coarse powder, with a mixture of one part alcohol and three parts water at about 37½° C. (100° F.), evaporate (below 100° F.) or dilute to the required strength, The extract prepared in this way is practically free from starch and other impurities.

If we examine the animal organism, we find several ferments which are analogous to diastase, and by some investigators they are considered identical. Diastastic reactions play an important part in the animal economy, and especially in the digestion of starchy food. In the saliva we have ptyalin; in the pancreatic juice there exists an analogous fermentive principle in such quantity as to cause that secretion to act infinitely more rapidly on starch than saliva; in fact, its action is almost instantaneous. In the liver we also find a similar, if not identical ferment, which, in conjunction with the blood, converts the glycogen (animal starch) into sugar. The chemical phenomena of nutrition in vegetables and animals furnish a striking parallel, as shown by M. C. Bernard, who says:

"The ferment appears in seeds from the commencement of germination; this takes place in the potato in

spring; then the fermentiferous agent shows itself in the tubercle, as it did in the germinated barley. It liquefies the starch and puts it into a condition to be distributed over the parts where it may minister to the nutrition; that is to say, to the development of the life of the plant. In most animals the phase of the production of glycogen, and that of its fermentation, are not so distinct as plants. The two phenomena are often continuous and simultaneous. An exception must, however, be made with respect to the earliest periods of life, especially in those animals which undergo metamorphosis. For example, if we consider the larva of the common fly, musca lucelia, the gentle—if we call it by its common name—we find that it contains an enormous quantity of starch. It is truly a bag full of glycogen. At this time we find nothing else but glycogen, and not even a trace of sugar. The reason for this is that the glucose ferment does not yet exist. But soon the chrysalis will succeed to the larva, and then in the new phase of existence, during which the perfect animal is in formation, the reserve glycogen must be utilized, the ferment appears, and the starch is liquefied."

"Something analogous to this is seen in beings of a higher order—for example, among the mammalia at that period of embryonic life when the nutrition is hastened, and the plastic and formative activity attains its highest degree. The glycogen matter is deposited at various points of the fœtus and of its envelopes, is set in motion, dissolved, and transformed into sugar."

"The digestion of starches consists in their transformation into soluble and assimilable substances, soluble in order to be able to circulate from one part of the organism to another. Digestion is, therefore, the prologue of the act of nutrition. Whenever these starchy matters are to nourish an organism we shall find this previous preparation. But all organisms in the vegetable, as well as in the animal kingdom, employ starchy substances as food; all, therefore, digest these substances in the strict sense of the word."

It has been proved by the experiments of Cl. Bernard, Magendie, Schiff, and Hensen, that in living blood there exists a ferment capable of converting starch and glycogen into sugar. This ferment is even found in the blood of frogs in spring and summer, when, if dextrine be injected into their veins, it passes in the form of sugar with the urine; in winter it is not present, for the dextrine then passes with the urine unaltered.

Thus it is seen that diastase plays an important part in digestion by transforming the starches into soluble substances which are readily assimilated; and there seems to be no reason why a pharmaceutical preparation containing diastase, if properly prepared, would not be a medicine of great value; but it is to be regretted that many of the preparations on the market at present are of little or no value.

DISINFECTANTS.

PRELIMINARY REPORTS OF THE COMMITTEE ON DISINFECTANTS OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

XVI.

NOTES.

BY THE CHAIRMAN OF THE COMMITTEE.

My attention has just been called to an advertisement of "Withers's Antizymotic Solution," in which it is stated that it is endorsed as the best by George M. Sternberg, M.D., Surgeon U. S. A.

I have never authorized the use of my name in connection with this or any other proprietary disinfectant. The only reference I have ever made to "Withers's Antizymotic Solution" is in the report on "Commercial Disinfectants," No. 2, published in THE MEDICAL NEWS of June 13th, where this has the *third* place in a list of fourteen commercial disinfectants, tested under my direction by Dr. Abbott. The remark is made, "contains mercuric chloride." As a simple solution of mercuric chloride of 1 : 500 would be quite as efficient as 4 per cent. solution of this disinfectant, the extravagant claims made for it are without foundation. The assertion, that it is endorsed by me "as the best," is untrue.

Labarraque's Solution.—I have received the following letter from a well-known and reputable firm of manufacturing chemists:

"In THE MEDICAL NEWS (Philadelphia), for June 13th, we find a continuation of the Preliminary Report of the Committee on Disinfectants, including a report on the relative percentage of available chlorine, in samples of different manufacturers of Labarraque's Solution. As you are doubtless aware, Labarraque's Solution is a very unstable preparation; and, although made with every possible care, will surely deteriorate by age. With such an article it is manifestly unfair to institute comparisons between different makers without regard to the freshness, or otherwise, of the samples. To the unthinking reader the bald statement that one preparation contains 3.8 per cent., and another only 0.013, is calculated to convey the impression that the preparation which contained so small a percentage has been improperly made (while really when fresh its percentage might have been greater than the highest named); and such an impression would naturally create a prejudice against the manufacturer, and, unfortunately, not be limited to the particular article mentioned."

I recognize the fact that the unthinking reader might make an inference unfair to the manufacturer from the perusal of a "bald statement," such as is published in the table on page 659 of THE NEWS. I regret this, and will in future gladly give the date of manufacture, if the manufacturers will stamp it upon the bottle. As I propose to obtain new samples from time to time, and to publish the results of tests as to available chlorine, it may happen that the aggrieved manufacturers in this instance will come out at the head of the list the next time. But these tests are made especially in the interests of the public, which, from my point of view, are superior to those of the manufacturers, and it is evident that great harm might result from reliance upon the disinfecting power of a liquid labelled "Labarraque's Solution," which contained only 0.013 per cent. of available chlorine. The fact that it was of full strength when first manufactured, does not add to its value as a disinfectant for the excreta of a patient with cholera or typhoid fever. If the manufacturers will stamp the date of manufacture upon the label attached to each bottle, I will publish it, in future, in connection with the result of the tests to determine available chlorine present in the solution.

Disinfecting and Antiseptic Powder.—The powder under this name, for which a formula was given in

the Preliminary Report, No. IX. (THE MEDICAL NEWS of April 18th, p. 425), was withdrawn in a letter published in THE NEWS of May 2d.

The writer was responsible for this powder, and withdrew it because of the fact that mercuric chloride is decomposed by the hypochlorites in the presence of moisture. In the powder, made as directed, this reaction does not occur, and the keeping properties of the powder are all that could be desired. But when water is added to it the reaction occurs, and the yellow oxide of mercury is precipitated. This fact having been brought to my attention I hastened to withdraw my recommendation of the powder, although I had been much pleased with it in practical tests upon feces. Since my return from Europe I have made some additional experiments, which show that, notwithstanding the destruction of the bichloride, the powder is an excellent disinfectant and antiseptic. A sample which I have recently examined contained 2.6 per cent. of available chlorine after the precipitation of the yellow oxide by the addition of water. This same sample, after standing in an open box in the laboratory for about three weeks, still contained 1.5 per cent. of available chlorine at the bottom of the box, and 1 per cent. at the surface of the powder, which had been exposed to the air during this time. I have demonstrated, by recent experiment, that mercuric oxide is a valuable antiseptic. In the proportion of 1 : 2000 it retards the development of microörganisms in beef-tea inoculated with two or three drops of broken-down stock; and in the proportion of 1 : 1000 it entirely prevented development for a week, the duration of the experiment, while in the comparative test the beef-tea broke down in less than twenty-four hours. Nevertheless, I do not endorse the formula which I first recommended, for the reason that mercuric oxide has an antiseptic power inferior to that of the bichloride, and it is a waste of material to use the bichloride of mercury in the same formula with the hypochlorites. I would, therefore, recommend that the powder be made without the addition of mercuric chloride.

My object is to dilute the chloride of lime so that it may be used more economically, *especially upon the surface of fecal matter in privy vaults*. Such a powder is especially needed in country places, where the old-fashioned, open privy vaults are in use, and in garrisons and military encampments.

Chloride of lime, as received from the manufacturers, is more or less lumpy, and cannot be readily scattered about in a uniform manner. It is also much stronger in chlorine than is necessary. I have, therefore, endeavored to find an inert substance suitable for diluting it.

Plaster of Paris has the advantage of retaining the chlorine better than anything else I have tried, and makes a powder which can be readily scattered about in a thin layer. Its property of setting with water is no objection to its use in privy vaults, cesspools, etc., but would be an objection to its use in chamber vessels, the contents of which were to be thrown into water closets.

To test the keeping properties of a mixture of chloride of lime and sulphate of lime, mixed together in equal quantities, by weight, I exposed a layer having a thickness of about one and a half inches in a shallow vessel, and, for comparison, a mixture of equal parts of chloride of lime and sand in a similar vessel. At the outset of the experiment the available chlorine in each specimen was found, by Dr. Abbott, to be 15 per cent. At the end of a week the mixture with plaster contained 12.9 per cent. of available chlorine, and the mixture with sand 6.8 per cent. At the same time two fruit jars were filled about one-third full with the two mixtures, and the metal covers were screwed on. In these closed jars the mixture with sulphate of lime contained 13.5 per cent. of available chlorine at the end of two weeks, and the mixture with sand 11.8 per cent.

A CASE OF MELANO-SARCOMA.

BY W. A. ROTHACKER, M.D. AND J. A. THOMPSON, M.D., OF CINCINNATI, OHIO.

CHARLES W., an American, aged 56 years, was admitted to the Cincinnati Hospital for the first time Nov. 20, 1882. He is a carpenter by trade, of good physique, and excellent habits. There is a family history of tuberculosis in some distant relatives but no other hereditary taint. Two years before admission he noticed what he calls a blood cyst on his back about the level of the lower angle of the scapula and one-half inch to the right of the spinal column. He attributes its formation to a knot tied in his suspenders which irritated the skin at the point of contact. This cyst was opened by a friend with a needle and bled profusely. Since that time it has been growing slowly, and is now the size of a goose egg. It is globular in shape, its attachment to the body being its smallest part. It is bluish-black in color. No pulsation can be felt. Four inches below this tumor is another small bluish-looking growth under the skin.

December 3.—Both tumors were removed by Dr. D. S. Young by oval incisions, and the edges of the wounds approximated by sutures.

7th.—There is extensive inflammation about the wounds. The sutures were removed and the wounds dressed with lint and vaseline, and quinine given internally.

10th.—The wound is discharging freely and granulations are forming. Only the upper two sutures have united.

21st.—The wound is healing rapidly by granulation, and, at the patient's own request, he was discharged to spend Christmas with his family.

To Dr. L. A. Nippert, of Minneapolis, Minn., at the time a surgical interne in the Cincinnati Hospital, we are indebted for the preceding notes. No microscopic examination of the tumors (which were believed to be nævi) was made at this time.

He was readmitted to the hospital August 29, 1883, with tumors varying in size from that of a pea to that of a hen's egg, covering all parts of the body, the feet alone excepted.

These tumors seem to take their origin from the subcutaneous connective tissue; and where the skin is not involved in the growth, there is no visible discoloration. But where the skin is involved in the

morbid growth, it is of a bluish-black color. The patient states that a tumor appeared on his back directly above the site of the larger growth, removed at his previous visit to the hospital, before the operation wound had healed, but it did not prevent the perfect closing of the wound. The cicatrix has never ulcerated, been painful, nor given trouble in any way.

He did not notice any other growths until about six months after the operation, when one appeared over the anterior edge of the right sterno-mastoid muscle on a level with the angle of the jaw. This tumor at present is multiple and about the size of a hen's egg. Discovering it, he examined his body, and found the tumors, as yet small in size, all over it. At the present time (August 29, 1883) there are visible over his body five hundred and sixty-one tumors.

Three hundred and twenty-seven are not visibly pigmented, and two hundred and thirty-four show marked discoloration. By passing the hand over the skin where it appears sound and healthy other small tumors can be felt in the subcutaneous connective tissue, apparently about the size of shot. Three of the larger tumors have ulcerated, as the result of some local applications made by a firm of advertising quacks, and are now covered by scabs.

The patient states that about eight weeks ago his testicles began to swell rapidly, and continued to increase in size until about two weeks ago, when the swelling partially subsided. The scrotum is now about the size of two fists, bluish-black in color, and firmly adherent to the testicles. The left testicle is much more enlarged than the right. The only thing abnormal found on physical examination was a systolic murmur, heard at the apex beat of the heart and transmitted to the left scapular and axillary regions.

The urinalysis showed sp. gr. 1010, acid, dark in color, with faint traces of albumen, but no sugar. Microscopic examination showed the dark color to be due to numerous dark brown or black pigment granules. The patient complains only of weakness and occasional pains in the more prominent tumors. Pulse 92; temperature and respiration normal. Ordered citrate of iron and quinine, grs. v, and opium gr. ss t. d.

September 2.—His stools are jet black.

3d.—He complains of intense burning pain in some of the tumors. Ordered morphia gr. ¼ every two hours.

9th.—Began to complain of obstinate nausea and constipation, apparently the result of the opiates given to relieve pain.

October 12.—At present there are about one thousand tumors visible over the body, most of them pigmented, bluish-black in color. Many are quite small, having developed since the last count was made. During the latter part of September the foreskin became indurated and swollen. This condition showed great variations, the foreskin being at times very much swollen and at others normal. The patient's strength failed rapidly. His skin became much darker in color, and the areas of pigmentation around the tumors in some places coalesced. Seeing the inevitable end of his sickness he desired to be with his family, and was discharged from the hospital at his own request.

He was under the care of Prof. P. S. Conner the last four weeks of his stay in the hospital. After leaving this institution he was treated by his family physician, Dr. W. H. Taylor, to whom we are indebted for the following brief note of his condition while under his observation: His strength failed rapidly and he suffered so much that it was necessary to keep him constantly under the influence of opiates. He died from exhaustion October 18.

A post-mortem examination was made the next day by Dr. Thompson assisted by Drs. Taylor, Langdon, and Walker, and the following results noted: Body that of a man of medium size, and very much emaciated. Rigor mortis slight. The skin was generally dark in color, but in some places had an ashen hue.

Over the entire surface of the body numerous tumors could be seen, mostly of small size. Some of the tumors were bluish-black, while others did not differ in color from that of the skin. On making the first incision and laying back the flaps it was seen that all the tumors were alike pigmented, the difference in color before noted being due to the involvement of the skin in the morbid growth over those that appeared black, while the others were limited to the subcutaneous cellular tissue. There were several tumors about the size of a hazelnut in the substance of the right pectoralis major muscle. The lungs were œdematous, jet-black in color, but contained no tumors. There were slight pleuritic adhesions over both lungs and an old cicatrix in the lower lobe of the right lung.

There were several small tumors in the muscular substance of the heart. In the subserous connective tissue over the left ventricle was a large patch of jet-black pigment. Some calcareous nodules were found in the aortic valves. The other valves appeared normal and competent.

The liver was firm, markedly pigmented, and contained numerous tumors, some as large as a walnut. Several of these large tumors were encapsulated.

The spleen was very deeply pigmented, and its tissues soft and friable, but it contained no tumors. A small supernumerary spleen was found.

The kidneys were enlarged, deeply pigmented, and each kidney contained several tumors varying in size from that of a pea to that of a hazelnut.

There were numerous tumors about the size of a pea in the subserous connective tissue throughout the whole length of the large and small intestine, and numerous similar growths in the great omentum and beneath the parietal peritoneum.

One small tumor was found projecting from the mucous lining of the bladder.

Owing to the objection of relatives, the brain was not examined.

Specimens of the tumors when subjected to microscopic examination, showed the characteristic structure of sarcomata.

There are very few cases on record similar to the one above reported. On October 10, 1882 Dr. William H. Falls of this city, presented to the Cincinnati Medical Society the report of a case of melanosis.

The case was that of a man at Greenville, Ohio, who had several small tumors—diagnosed congenital nævi—removed, after which operation there developed a number of pigmented nodules in and beneath the skin, accompanied by a general pigmentation of the skin, which eventually became so dark that the patient was easily mistaken for a negro. Dr. Falls, in his report, has not only given a thoroughly scientific account of his case together with the results of the post mortem and microscopic examination, but he has brought together almost, if not quite all that was known up to that time of this strange condition. Dr. Falls's paper was published in the Cincinnati *Lancet and Clinic*, November 18, 1882, and afterwards republished in pamphlet form, so that it is quite accessible to the profession.

In vol. xxxv., 1884, of the *Transactions of the Pathological Society of London*, a very interesting case of melano-sarcoma with subsequent general pigmentation of the body, formation of pigmented nodules in the skin and internal organs, is recorded by Dr. J. Wickham Legg. As the reports of the Pathological Society are not to be found, except in the larger libraries, a synopsis of the case is given. Dr. Legg's own words are used except where changes and omissions are required in order to condense the report. "James H., a carpenter, was admitted into St. Bartholomew's Hospital under my care July 1, 1883. His left eye was taken out on November 14, 1881, at the Royal London Ophthalmic Hospital, Moorfields, by Mr. Streatfeild, to whom I am indebted for the following particulars: Four months before, the left eye had felt tight and gummy, not acting with the right. No pain was felt. A solid growth could be seen involving the retina. When the eye was excised a soft tumor was found filling up the outer half of the globe. It was a black growth in the outer part of the ciliary region, firmly adherent to the sclerotic.

"Under the microscope the black tumor proved to be a spindle-celled sarcoma with a large quantity of pigment irregularly scattered through it.

"The patient left Moorfields November 19, 1881. For a fortnight before his admission to St. Bartholomew's, his belly had been hard and uncomfortable, and for a year it had been painful when pressed. The legs have been swollen for the last six weeks, the scrotum and penis, a fortnight. Almost six months ago he was told that his face was getting dark. The appearance of the face so strongly suggested staining by nitrate of silver that he was carefully questioned as to his use of this salt. A most thorough investigation showed that he had never used nitrate of silver in any shape, nor had it ever been used locally or internally in his case by any of the physicians or surgeons who had treated him at various periods of his life.

"The pigmentation of the face was uniform and not in patches or spots. Under the beard on the right side of the chin was a little black wen, or wart. The teeth had nearly all fallen from their sockets. No pigmentation of the mucous membrane of the mouth was noticed. The darkening was most marked over the face and neck. It was present on the hands, but very little over the rest of the body.

"Heart and lungs normal on examination. The belly was swollen. On the right side a tumor, continuous with the liver dulness, extended to the right iliac fossa. In the epigastrium a small nodule could be felt, making itself prominent above the general level of the surface of the tumor. This nodule was very painful on pressure. The spleen could not be felt. The belly was dull in the left flank, the dulness changing with the position of the patient. The urine was of a dark dirty-brown color, turbid, but clearing on heating. It contained albumen. No blood corpuscles were found.

"*July 13.*—Patient getting weaker. Liver very painful.

"*25th.*—Under the microscope the blood showed no dark granules, but an abundance of bodies of varying size and shape, usually very large and very irregular, looking like masses of white corpuscles fused together.

"*August 1.*—Urine gives deep brown color with hydrochloric acid and chloride of calcium which deepens, on standing, to black. No dark granules have ever been found in the urine.

"Died August 1. Examination twenty-six hours after death.

"Calvaria and brain natural. No recurrence of disease in the left orbit. Choroid plexus of brain not stained. On opening the belly, an abundance of dark colored fluid escaped. Liver adherent to abdominal walls, omentum, colon, and stomach. There are hemorrhages in the peritoneum.

"Four or five small dark spots in the endocardium on the right as well as the left side. A few small, firm, white nodules in the omentum and capsule of the spleen. Intestines, stomach, and pancreas natural.

"In the hilus of the liver there are several large glands, some dark, one cheesy and white. Gall-ducts free, gall-bladder collapsed. No thrombus in the portal vein. Liver weighs 5700 grammes. Numerous black and white spots are seen through the capsule. Section shows little of the normal liver tissue, the organ being filled up with numerous black rounded tumors, varying in size from a pin's point to a walnut. A few white tumors varying in size from a pin's point to a filbert, but no tumors showing an admixture of black and white. Diaphragm shows numerous small growths, both on the pleural and peritoneal surfaces. Left kidney contains a black rounded tumor the size of a filbert. None in right. After proper preparation, the growths from the various organs and the skin were examined under the microscope, and proved to be melanotic spindle-celled sarcomata in the case of the pigmented growths and round-celled sarcomata in the case of the colorless growths. The distribution of the pigment was very irregular in the black tumors. The skin near the wart on the face showed brown staining in the deep layer of the rete mucosum but no distinct pigment granules were discovered.

"Mr. Butler, who saw the case with me, called my attention to Clausel's thesis, and told me that this observer had discovered pigment granules in the blood, the urine, and the vomit of patients suffering from melanotic sarcomata. Nepveu first called attention to the appearance of pigment granules in the

blood and urine of these patients in a communication to the Society of Biology (Paris) in 1872. In our case there was the excess of white corpuscles described by Nepveu, but no pigment granules.

"While the urine was dark-colored, no black granules or black casts were found. This absence of granules in so widespread a case of multiple melanosis, is important, as Nepveu considers the presence of the black granules in the blood and in the urine a contraindication to operation; and if a surgeon had considered their absence to be a justification for an operation, he would have been seriously mistaken."

It is the aim of this paper to bring the literature of this subject to date. There are a few cases which are recorded in medical journals not within reach of the writer. We know comparatively little of the process by which pigment is deposited in tissues; we know less of the changes which take place in the blood whereby a general tendency to pigment deposit is developed.

Cases are on record where nævi have been transformed into sarcomata. Were the nævi which were removed in the cases where multiple melanosis afterwards developed in process of transformation at the time of surgical interference? Did this surgical interference open up ways by which the elements of the malignant growths entered directly or indirectly the circulation producing the disastrous general dissemination?

Were the seeds already sown in the blood when the surgeon's knife was brought into requisition, and did the operation of removing a nævus or suspicious growth have no bearing on the after extension of the condition?

Can the surgeon, in a case of doubtful tumor, or where the diagnosis is clear as to sarcoma, derive any useful points from the microscopic examination of the blood and urine?

Do not such cases as the case of Williams and others point to the need of an early removal of congenital nævi, warts, moles, etc.?

These are practical questions which our clinical records will not as yet permit us to answer, but which should be kept in mind in future observations.

MEDICAL PROGRESS.

COCAINE IN HAY FEVER.—The therapeutical uses of cocaine are so numerous that the value of this wonderful remedy seems only beginning to be appreciated. Almost daily we hear of some disease or combination of symptoms in which it has been tried for the first time and has answered beyond expectation. It appears strange that so intractable a complaint as hay fever should be amenable to its influence, and yet such is the case. The account given by Mr. Watson, of the Westminister Hospital, of his sufferings and subsequent cure by tabloids of cocaine, is too circumstantial to admit of doubt, even had we not received confirmatory evidence from many sources. It has been objected on theoretical grounds that cocaine must of necessity be inoperative, or at all events of comparatively little use, in those cases in which symptoms of an asthmatic type prevail. Curiously enough, however, it has been shown that cocaine, when applied to the mucous membrane of the nostrils, has the power of allaying even this spasm. The observation, too, is not new; for many months ago Dr. Bosworth, Professor of Laryngology at Bellevue Hospital Medical College, published a detailed account of a case of spasmodic asthma completely cured by cocaine. He pointed out at the time that many inveterate cases of asthma are dependent on, or at all events associated with, nasal disorders, the relief of which is promptly followed by an abatement of all the distressing symptoms. If this principle of associated treatment should be carried on in its integrity, it will be difficult to assign the limits of its sphere of action.—*The Lancet*, July 18, 1885.

ALBUMINURIA: ITS CAUSES AND VARIETIES.—SENATOR, in the *Berliner med. Wochenschrift*, No. 16, April 20, 1885, enumerates the following conditions liable to determine the presence of albumen in appreciable amount in the urine:

Disturbances of the renal circulation. High pressure, if the urine be concentrated, should produce albumen. This condition is actually found to obtain by muscular action, on account of perspiration and loss of fluid by the lungs, and, though not so accurately, by elevation of temperature.

Passive hyperæmia acts in itself similarly to increased arterial tension, but the distended veins in the medulla of the kidneys press together the urinary tubes, leading to obstruction of the passage of urine and œdema of the kidneys. The consequence is:

a. That albumen transudes from the interstitial capillaries into the urinary tubes.

b. That urine exerting pressure upon the glomeruli produces a diminution of pressure from the glomeruli, and leads to a relative increase of excretion of albumen. To this cause of albuminuria is allied that caused by blocking of the urinary tract, manifested when the impediment is removed, or when the obstruction is not complete.

c. The condition of the filtering membrane, as in inflammation, fatty degeneration, and amyloid change. Not only does albuminuria result from an increased permeability, but the degenerated membranes and epithelium themselves appear in the urine as albumens, and this may explain the fact that in the urine albumens may have a different relation to each other from what exists in the blood. The substance of the epithelium appears to contain a body intimately allied with globulin.

d. The composition of the blood may cause the appearance of albumen, *e.g.*, from an excess of nutriment, from increased dissolution of albumen, or from excessive secretion of water elsewhere, etc. It is held by Rosenbach, that the composition of the blood is constantly regulated by the action of the kidneys, and that inassimilable albumen is excreted by the kidneys. Albuminuria not caused by inflammation, this author designates as "regulatory." His idea, though important, is not free from objections.

Finally, as Stokvis and Lehman have pointed out, the excretion of albumen can act injuriously on the kidneys.

e. Mention has already been made of the influence of temperature in connection with changes of pressure.

The author further remarks tha the forms of albuminuria may be clinically divided into two classes, pathological and physiological, although no exact line of demarcation distinguishes them. Among physiological albuminurias may be mentioned that of the newborn, which is probably due to the suddenly increased pressure in the glomeruli, taken in connection with the probably increased destruction of the blood-corpuscles.

Albuminuria can exist in a healthy man for years without any sign of ill-health, and then cease.

Fürbringer, too, has found this condition in children, in whom chronic nephritis is very rare.

The author, in this connection, alludes to the albuminuria due to mental perturbation, and to that caused by cold baths.

Pathological albuminuria includes the following:

1. That present in non-febrile diseases, in which the composition of the blood is specially concerned, and in which the kidneys do not participate to any extent; in anæmia, leukæmia, and pseudo-leukæmia; in scurvy, in icterus, and in certain cases of diabetes. Nothing is found in the urine indicative of renal disease.

2. Albuminuria in non-febrile nervous diseases, in epileptic seizures, delirium tremens, cerebral apoplexy, neurasthenia, migraine, Basedow's disease, etc., and allowing for other existing causes, numerous cases exist where the albuminuria is traceable only to the nervous condition.

3. Febrile albuminuria. In this condition there is a combination of favoring causes, such as high temperature, febrile changes in the circulation and in the composition of the blood, with consequent disturbance of the nutrition of the kidneys, and, lastly, concentration of urine.

4. Albuminuria of passive hyperæmia.

5. That due to blocking of the urine.

6. The albuminuria of pregnancy due to various causes, disturbance of the lesser circulation, passive hyperæmia due to abdominal pressure on the vessels, and constriction of the ureters.

7. That due to diffuse inflammation and degeneration of the kidneys (acute nephritis, subacute and chronic and amyloid degeneration).

8. That depending on circumscribed affections of the kidneys, such as infarcts, abscesses, and tumors.

In conclusion, the author insists on the necessity of constantly remembering that the treatment of each individual case of albuminuria varies with the exciting cause.

GASTROSTOMY IN LEYDEN.—PROF. VAN ITERSON, of Leyden, has published notes of two interesting cases in which he performed gastrostomy. The first case was that of a gentleman, aged fifty, who had carcinoma of the œsophagus, and who had been unable to swallow any food for several days before the operation, and was consequently reduced to a state of great emaciation and debility. The abdominal wall was opened and the stomach fastened to it, arrangements being made for supporting life by means of nutrient enemata until it should be thought safe to open the stomach. Collapse, however, came on shortly after the operation, and death supervened. The Professor says, that if he had another similar case he would open the stomach at a single operation. The second case was more satisfactory, and was that of a painter, aged fifty-seven, who suffered from a carcinomatous tumor affecting the suprascapular region, the neck, pharynx, œsophagus, and larynx. When seen in July, 1884, he had had difficulty in swallowing for about a year, the last four months of which time he had been unable to take any solid food. A small bougie (No. 27 Charrière) was with great difficulty passed through the stricture. The first part of the operation was performed on the 16th of July under an anæsthetic, with antiseptics, but without spray, and consisted in opening the abdominal wall, lifting aside the liver, seizing the wall of the stomach as high up as possible, and attaching it with ligatures very carefully to the abdominal wound. This was dressed with powdered iodoform and salicylic wool. The patient was supported by nutrient peptonized enemata for six days, when an opening was made in the stomach with the galvano-cautery sufficient to admit the end of a three-quarter centimetre India-rubber tube; the other end of this was provided with a funnel. At first, liquid nourishment was administered through this; then solid food was chewed in the mouth and spat into the funnel, the India-rubber tube being thus an artificial œsophagus. The patient expressed himself as well satisfied by this method of feeding. He left the hospital three months after the operation. Two months later (November) he returned, complaining of dyspnœa from obstruction of the larynx. Tracheotomy was performed, and a month later it was noted that his daily nourishment consisted of five slices of bread, two eggs, one cup of soup, one beer-glass of port wine, one ounce of raw beefsteak with potatoes, greens, and rice, and one litre of milk. Two months later, or eight months after the operation, the malignant tumor increased considerably, and hemorrhage occurred, which in a few days induced a fatal termination of the case. At the autopsy the stomach was found attached to the abdominal wall for about the size of the surface of a dollar. The fistula was 70 millimetres to the left of the cardia, 240 from the pylorus, and 40 from the insertion of the omentum. The mucous membrane was pale, but healthy; above, the stomach was found adherent to the diaphragm. Professor van Iterson remarks that few cases have lived eight months and a week after this operation. He agrees with the advice given by other surgeons that the opening into the stomach should be as far as possible from the pylorus. In both cases he was able by means of a sharp hook to bring the most suitable portion of the stomach to the wound.—*The Lancet*, August 8, 1885.

STRANGULATED UMBILICAL HERNIA. REMOVAL OF SIX INCHES OF SMALL INTESTINE. RECOVERY.—MR. W. H. FALKER reports a case of strangulated hernia resulting in recovery after removal of six inches of the small intestine. The patient, a woman aged forty-seven was admitted to the infirmary suffering from strangulated umbilical hernia. About twelve years ago, whilst carrying a basket, she suddenly felt something give way at the umbilicus, and a swelling arose, accompanied by pain and sickness. These symptoms subsided in three days, but since that time she had had several recurrences, generally lasting only a few hours, and being relieved by her assuming a recumbent position.

On February 25th, the patient had a return of all the symptoms, but attended with a burning pain, which continued to increase. She was induced to send for a

medical man, who urged her to apply at once to the infirmary. At first she declined, but the pain and sickness increasing, she came in on the 28th.

On admission, the patient, a corpulent woman, appeared to be in a most exhausted condition, suffering from almost constant vomiting of a fecal character. She had a large umbilical hernia, evidently not only strangulated, but gangrenous, for even the skin covering it was quite black, and smelt most offensively.

Immediate operation was resorted to, the patient being cautiously etherized. An incision was made, of the length of the tumor, opening the sac, when a large piece of bowel was found to be quite black, the contents having escaped into the sac through an opening about an inch and a half in length; the omentum and everything within the incision was gangrenous. The skin and everything that was sloughing, except the bowel, was first removed, and the cavity well washed out with carbolic lotion, and then the bowel (which was small intestine) was drawn well forward till a sound portion was reached at each side; the inner halves of each portion were cut through and carefully stitched together, with their peritoneal surfaces in contact, the outer half of each piece of bowel affording a secure hold whilst this was being done; these were then removed, and the cut edges secured to the skin, forming an artificial anus. The edges of the skin below were brought together by two harelip-pins, and the parts dressed with oiled lint (carbolic oil 1 in 20), covered with absorbent wool, a wide flannel roller being applied over all. She was ordered to have the urine drawn regularly with the catheter, and to take ice and soda-water.

February 29th (the day following the operation). The temperature was normal. There was fecal discharge from the bowel-opening. The patient was looking better, although vomiting, with a fecal odor, still continued, and she had some little pain. A subcutaneous injection of morphia was given, which relieved the pain and checked the sickness. The skin over the abdomen was covered with oxide of zinc ointment spread on lint.

April 9th, the patient informed the physician in charge of her probable pregnancy; examination showed her to be so and after consultation abortion was performed, from which she recovered fully.

All efforts to close the artificial opening in the bowel were ineffectual. By the use of enemata a natural motion first occurred on June 23d and again on June 26th. Efforts again repeated to close the external wound by refreshing its edges and suturing them were all unsuccessful. September 22d, a motion of the bowels occurred for the firs time without enemata, and again on the 29th. This did not occur again, and enemata were once more resorted to and always with good result. Fecal matter, however, continued to well up through the wound, though it was reduced to the size of a three-penny piece.

The woman was discharged at her own request, and remains exactly in the same condition as when she left the infirmary.—*British Medical Journal*, August 15, 1885.

LEAD POISONING BY LONG-CONTINUED PAINTING OF THE FACE.—PROF. ROSENTHAL recently showed, at the Society of Physicians of Vienna, an interesting case which had been under his treatment as an out-patient at the "Allegemeines Krankenhaus." The patient, an actor, aged thirty-seven, had long noticed an emaciation of the fingers of his right hand. Prof. Rosenthal found, on examination with the electrical current, a loss of power and of faradic irritability in the common extensors of the fingers, and in the lumbricales as well as in the fourth interosseous; galvanic contractility was not lost. The supinator longus was not affected, but the irritability of the radial nerve was much diminished. The left hand was normal, except that the power of abducting the thumb was somewhat impaired. The idea that it was a case of paralysis caused by pressure was abandoned in view of the slow development of the case, the implication of the fourth interosseous muscle, and the normal state of the supinator. Progressive muscular atrophy was also excluded, as the development and reaction of the muscles of the thumb were normal, and there was no muscular atrophy of the arm, though the irritability was diminished. The whole complex of symptoms, however, induced Prof. Rosenthal to diagnosticate lead poisoning. He, therefore, had the gray and red paint that had been used examined by Prof. Ludwig, who found that both contained a considerable proportion of lead.—*Medical Times*, August 15, 1885.

THE TREATMENT OF SYPHILIS BY INJECTIONS OF CALOMEL.—V. WATRASZEWSKI, in the *Viertel Jahrschrift für Dermatologie und Syphilis*, Bd. xi., reports the subcutaneous injection of calomel in seventy cases of recent syphilis. With the exception of a few cases in which the dose was doubled, the drug was injected in quantities of one and a half grains in solution of cocaine. The injections were commonly made in the gluteal region at intervals varying from seven to ten or fifteen days.

In four instances only was it necessary to increase the intervals on account of mercurial stomatitis. As a rule, three injections were sufficient to cause abatement of the existing symptoms. A fourth injection was, however, generally administered. In only one case was a fifth injection necessary. In two hundred and fifty-seven injections, only four cases of abscess occurred, and these during the first weeks in which the injections were practised.

Inasmuch as abscess did not occur later, it is attributed to faulty injection or to some special condition. The local pain was slight and did not interfere either with the sleep or avocation of the patient.

However, Dr. v. Watraszewski advises that, during the first days after injection, the patient should not move about to any great extent or be permitted to do heavy work. He also calls special attention to the advantages of this method of treatment in reference to outdoor patients.—*Centralblatt für Chirurgie*, August 8, 1885.

ANTIPYRIN IN SCARLET FEVER.—DR. FREDERICO VANANZIO, after a clinical study of the use of antipyrin in scarlet fever, reaches the following conclusions:

1. Antipyrin certainly reduces the temperature in scarlet fever for a length of time and to an extent which vary with the dose and individual; but the fever, on the cessation of the action of the drug, returns with renewed intensity, even when, by the careful diligent use of the

remedy, it has been possible to suppress it for many hours in succession.

2. During the hyperthermia procured by the administration of antipyrin no appreciable improvement, either subjective or objective, is manifested by the patient, aside from the simple reduction of the fever.

Indeed, the ordinary syndromes and complications of the disease, such as pharyngo-laryngitis, adenitis, nephritis, gastro-enteritis, bronchitis, stupor, coma, etc., are neither prevented nor modified. In the toxic forms when it is desirable to reinforce the cardio-vascular tone antipyrin does not in the least oppose the advance of collapse.

3. Antipyrin does not exercise any favorable influence upon the ordinary duration of the disease. In some circumstances it seems rather to prolong the so-called stage of invasion, and to retard the appearance of the eruption, a fact which has already been noted in rubeola and measles.

4. In some subjects antipyrin induces mydriasis and symptoms of slight cerebral congestion and persistent vomiting which prostrates the patient.—*Gazzetta medica di Torino*, July 25, 1885.

VERATRIA IN THE TREATMENT OF GENERAL OR LOCALIZED PRURITUS.—DR. J. CHÉRON, in the *Lyons Médical*, remarking the difficulty experienced in the treatment of the pruritus often observed at the menopause, whether as due to prurigo, urticaria, eczema, or herpes, or as existing without an eruption, recommends the following ointment:

℞.—Veratria . . . . . gr. iiss.
Adeps . . . . . ℥j.—M.

Ft. unguent. S. Apply in quantities the size of a small pea, morning and evening, by gentle friction to the affected parts when the pruritus is localized in the groins, axillæ, or upon the abdominal wall.

When the pruritus is general the internal administration of the drug is advised:

℞.—Veratria . . . . . gr. ⅓.
Pulv. glycyrrhizæ . . . . q. s.—M.

Ft. pill No. xl.

S. 2 to 6 pills daily, a half hour before meals or three hours after.

A single pill should be taken as an initial dose, and an additional pill taken each day until a maximum of 6 pills daily has been reached.—*Journal de Médecine de Paris*, August 9, 1885.

HEMIPARESIS AND HEMIANÆSTHESIA FOLLOWING DIPHTHERIA.—PROF. ROSENTHAL, at a recent meeting of the Society of Physicians of Vienna, exhibited the following case occurring in his practice, which he considers to be unique. The patient, a girl aged fifteen, had suffered some weeks previously from an inflammation of the throat which got better after the use of a gargle without other medical treatment. The third week after her recovery she felt pains in the right arm and leg, the right hand was powerless to grasp anything, and she could not double her fist. About this time she began to talk through the nose, and the fluids which she took returned by the nostrils; even water could only be sipped occasionally. Diplopia was also complained of. Recently pains in the left leg also appeared, and the fingers of the right hand became insensible. When the patient was examined by Prof. Rosenthal in the sixth week there was paresis of the right arm, the mobility of which was impaired, the grasp of the hand was feeble, and there was loss of power in the right leg. The faradic reaction was everywhere normal, and the tendon reflex was also unaffected. The skin on the right side of the body was insensible to electrical as well as mechanical stimulation. The application of the faradic brush to the arm, the mamma, the abdominal wall, the nates, the thigh and legs, the nape of the neck, and the back, produced no pain, and the same was true of heat and cold. The palatine arch was displaced towards the left side, and both its right half and that of the pharynx, and, according to Dr. Chiari, who had examined the patient with the laryngoscope, the right half of the epiglottis as well suffered from impaired sensibility; besides which there was paresis of the right vocal cord. In the nerve plexus of the arm, and in the course of median and radial nerves on the right side, there were points which were tender on pressure, and the same were to be observed in the case of the peroneal nerve. The excitability of the fifth nerve and the sense of taste were impaired on the right side. There was no symptom of hysteria; and menstruation was regular. All the symptoms pointed to a conducting anæsthesia in the region of the right spinal roots and posterior branches which had been preceded by a condition of irritation. Pierret and Déjerine had found an infiltration of the nerve nucleus and proliferation of neuroglia in the nerve roots and nerve trunks after diphtheria.—*Medical Times*, August 15, 1885.

TERPINE.—R. LÉPINE, at the conclusion of an experimental study of terpine, makes the following résumé of the qualities of the drug:

Clinical observation proves that terpine when ingested is active, but harmless, even in large doses, except to those affected with renal disease, and with whom, on this account, the doses should be moderate. Introduced directly into the blood in doses no longer medicinal but toxic, besides the action which it exercises upon the nervous system, it tends to produce an excess of hæmoglobin in the blood, polycholia, and even hæmoglobinuria.—*Revue de Médecine*, August, 1885.

PARALYSIS OF THE LEFT ARM AND LEG, WITH A SINGULAR EFFECT ON THE PULSE OF THE SOUND ARM.—DR. A. T. GUNNING reports a case of paralysis of the right arm and leg, with singular effect upon the pulse of the sound arm. There was neither motion nor sensation on the affected side. Temperature on both sides was normal. Heart sounds normal but slow, no pulsations at the radial or brachial artery of the sound side. The pulse on the paralyzed side was 35, soft, and regular. During all the time the man was under treatment there was no return of the pulse on the right side, although its muscular power and movements were quite good.

The cause of the absence of pulse is obscure. Had there been embolism, some visible change in the arm would have been experienced, but of this there were no signs, neither numbness, pain, tenderness, swelling, pallor, nor gangrene.—*The Australian Medical Journal*, June 15, 1885.

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SATURDAY, SEPTEMBER 5, 1885.

THE CONTINUOUS OR SPIRAL CATGUT SUTURE IN GYNECOLOGY.

THE use of the continuous catgut suture in gynecology, especially in plastic operations, has, probably, not received in this country the attention it deserves. The remarkable successes, especially in perineorrhaphy and in perineoplasty, that have been attained with it abroad by Schroeder, Bröse, Bar, Veit, and others, entitle the method to be properly understood and fairly tried.

Among important contributions to the literature of the subject may be mentioned one by BRÖSE, *Arch. für Gynäkol.*, 1883, one by BAR, *Archives de Tocologie*, February, 1885, and a discussion upon the subject by the Berlin Obstetric and Gynecological Society, in connection with a paper by Schroeder, the report appearing in the *Centralblatt für Gynäkologie*, July 18th. A study of the subject chiefly in connection with these contributions may be interesting and valuable to our readers.

According to Schroeder, Graefe was the first to use the continuous catgut suture in a recent rupture of the perineum, but it was not until Küster devised the method of preparing the catgut in oil of juniper that these sutures dissolved in nine days.

Of course, the catgut must be completely aseptic, and in its preparation one has to avoid such changes as will prevent its too rapidly dissolving in the tissues, or its failure to dissolve at all. The latter accident, which has occurred to us in some cases from using the MacEwen catgut, is very trying to the patient and mortifying to the operator.

According to Bröse Number 2 Lister's catgut is a suitable size, but it is not to be prepared according to Lister's method. Apparently the best method of preparing it is, first, soak it twelve hours in Van Swieten's liquor, and then place it in oil of juniper; no definite period is stated for its remaining in the oil of juniper, but probably a few hours will be sufficient; afterward it is preserved for use in absolute alcohol, and immediately before being used is washed in a 4 per cent. solution of carbolic acid.

Schroeder thinks it of very great importance not to irritate the denuded surfaces in a perineoplasty in the process of cleansing them, and he is now using for the latter purpose only distilled—that is, sterilized water. Veit irrigates these surfaces with a 1 to 10,000 sublimate solution. The method of denuding the surfaces is immaterial, only care must be taken not to carry the denudation too far on the sides lest undue tension results.

After the surfaces have been freshened, the operator, taking a needle threaded with catgut, begins stitching at the upper, the vaginal angle of the wound; after passing the suture from one to the other side he may either knot, or tie the catgut, and he then stitches from side to side, making a continuous or spiral suture along the vaginal surface of the rent to the skin surface of the perineum. He may then continue with the same needle, sewing up the perineum with deep and with superficial sutures; or for the present leaving that needle and catgut, take another threaded needle, and begin the stitching of the perineum at the posterior portion of the rent, and when he has completed this by a similar spiral suture, remove the needles, and tie the two pieces of catgut together. Or the same result may be accomplished if only a single catgut suture has been used, since in knotting or tying the first stitch, one may leave a projecting piece, and to it the final end is tied, the initial and terminal portions being thus united. In case the tear of the perineum be complete, it is well to use stitches in the rectum, and these are taken in the same way as the vaginal, but, of course, should be made before the latter. Bar states that some operators regard it as important to knot the suture from time to time, this prevents separation of parts if the catgut should happen to break. So, too, even in the vaginal stitching if the depth of the fissure be great, it is of essential importance to have a series of deep, and then one of superficial sutures.

One should have three or four needles threaded, so that, if the catgut breaks, there will be no delay in continuing the operation; these needles and catgut are kept in the carbolized water mentioned. Schroeder mentions among the advantages of the continuous catgut suture the rapidity with which the operation can be done, the absence of bleeding, and the accuracy with which the torn surfaces can be brought and kept in contact.

After the operation he has the patient's lower

limbs fastened together, and keeps her in bed three weeks. To prevent distention of the rectum with fecal gases, he makes a subcutaneous division of the anal sphincter, and inserts a small tube in the rectum.

His results are of twenty-five operations upon twenty-four patients, all cured—one, as will be observed, had to have a second operation.

The results of colporrhaphy have also been much more favorable with the continuous catgut suture; posterior colporrhaphy gave more successes than anterior, the movements of the bladder interfering with perfect healing in the latter, a difficulty which he has endeavored to overcome by tamponing the vagina with iodoform cotton.

Odebrecht claims brilliant results from this suture, which he has adopted by the advice of Hofmeier; he has operated in three cases of rupture of the perineum, all of which succeeded; two of them being primary, the other a secondary operation. In one of his cases he used a rectal suture, introduced before the vaginal.

Veit's cases of perineal operation with catgut suture were seven, and six were successful. Beside, he had used this suture in thirty cases of prolapse operations, and two of vesico-vaginal fistula: the results were good.

Our own experience with the continuous catgut suture in gynecology has not been so great as to justify a conclusive opinion. The first difficulty we met, and which prevented success, was the unsuitable catgut used; some broke at almost every stitch, others split even after threading the needle and while taking the stitches, while still others refused to dissolve. Nevertheless, with catgut of suitable size and quality, and prepared as mentioned in this article, the results have been such as to encourage us to new trials.

INFECTIOUS PNEUMONIA.

MASSALONGO has described an epidemic of pneumonia in Tregnigo, a town in Italy of 2000 inhabitants, which presents certain points of interest. One hundred persons were attacked, of whom thirty died. No special atmospheric or telluric conditions preceded the outbreak, which was limited in extent, and spread from house to house, three, four, or five cases occurring in each one. The onset of the disease was rarely with a rigor, usually with malaise, headache, and indisposition for three or four days, rather resembling typhoid fever. The lung symptoms were usually marked, the expectoration rusty, but resolution was not often preceded by any critical phenomena, and took place very slowly, the patients remaining in a heavy, apathetic state. Delirium was frequent, and at times furious. Meningeal, articular, and renal complications were common, and hypertrophy of the spleen almost constant. During convalescence paralytic affections developed in three cases. After death it was observed that putrefaction supervened very rapidly. The characteristic microorganisms were found in the sputum. Many interesting facts are given in proof of the contagious nature of the disease.

There can be no doubt that this was an epidemic of an infectious disease with pulmonic lesions, but the mode of onset, course, and character of the symptoms seem very different, in many respects, from those of ordinary croupous pneumonia. Similar differences have been observed in other epidemics and the identity of the affections has been questioned by several observers.

A RECENT ARGUMENT FOR MATERNAL NURSING.

THE question of maternal nursing is an old one. It is probable that in the time of the Egyptian bondage, some women among the Israelites were wet nurses, else we cannot readily understand the disposition which Pharaoh's daughter at once made of the new-found infant Moses. Nevertheless the ancients were especially favorable to the mother's nursing her infant, because they believed that the latter sucked with the milk that nourished it, certain moral qualities. Among the bitter reproaches that the deserted Dido heaped upon the escaping Æneas was this, that he had nursed the breasts of Hyrcanian tigresses.

There is an interesting passage, a part of which illustrates this belief, found in Plutarch's sketch of Cato, the Censor: "As soon as he had a son born, though he had never such urgent business on his hands, unless it were some public matter, he would be by when his wife washed it and dressed it in swaddling clothes. For she herself suckled it, nay, she often, too, gave her breast to her servants' children, to produce, by their sucking the same milk, a kind of natural love in them to her son."

Nevertheless, all Roman women did not suckle their children, as is shown by the incident narrated by Livy concerning Gracchus, returning in triumph to Rome; he, seeing upon the walls his mother and his nurse, gave the latter a rich golden collar, to the former only a plain silver ring. So, too, Marcus Aurelius declared that she was only half a mother who gave birth to a child and did not suckle it. Upon some of the tombs of women dying in the time of Hadrian there have been found, as expressing the highest praise, these words: *Filios suos propriis uberibus educavit.*

Maternal nursing has been held so important that it has been urged, not only by physicians, philanthropists, political economists, and philosophers, but even presented as an imperative duty by some religious teachers. Two medical men very eminent in their day, Stahl and Van Helmont, were, however, exceptions to the general rule mentioned as to physi-

cians; they maintained that the mother's milk was not sufficient, and advised giving with it pap. Alas, that the pap doctrine ruled so long, and is still held by some who have the charge of infants, for the murder of unnumbered innocents has been its necessary result.

It is believed that the number of mothers who do not nurse their children increases rather than diminishes. Of those who thus fail in the natural complement of pregnancy, many cannot; the reasons for this inability, or disability, are in part given in the late Dr. Clarke's work upon *Sex in Education*, a work that should be in the hands of all parents and teachers of girls. Many others will not; they are unwilling to make the sacrifice of convenience, comfort, rest, and time which nursing an infant involves. It is hardly necessary to say that this sacrifice is very great, and only made in many cases with much pain, exhaustion, and weariness, and often only possible by the power of maternal love and the strength of consecration to duty. In the eloquent and bitter reproaches which are attributed to the mother of St. Simeon Stylites, when she found her son after twenty-seven years absence, and he refused to see her, she uttered these words: "My son, why have you done this? I bore you in my womb, and you have wrung my soul with grief. I gave you milk from my breast, and you have filled my eyes with tears."

When such an obvious duty as maternal nursing is so frequently neglected, it is important to repeat old and to present new arguments in its favor. The *Bulletin Général de Thérapeutique*, of July 15, contains an interesting article by DR. SÉJOURNET upon the influence of natural nursing in the treatment of diseases of young infants, in which some important facts are presented in favor of natural rather than artificial food for infants. The author's purpose is to show that the milk of the mother, or of the wet nurse, is the best of medicines, the most precious and the most certain of therapeutic means, which can be used against the diseases of the first year. Such food is still more valuable in a hygienic than in a therapeutic view, and renders more service in prophylaxis than in cure.

Séjournet states that in seven cases of convulsions from gastro-intestinal irritation, five of the infants were fed by the bottle, and only two at the breast. Teething occurred in 47 infants under a year old without producing any irritation; 24 of these were nourished exclusively by their mothers' milk till they were six months old, after which other food was added, and the 23 others were also nursed by their mothers, but beside had soup and panada. Of 41 infants who suffered from gastro-intestinal irritation, while teething, 11 had the breast alone up to six months, while the other 30 had a mixed diet, viz., the mother's milk and starch food. 15 children between six months and a year old had convulsions, and 7 of these were bottle-fed, while the others, though having the breast, also ate freely. As the author observes, these figures are instructive, and plead in favor of natural nourishment as a preventive of the diseases so frequent in early infancy.

In sickness the milk from the bottle or the glass designed to replace the mother's milk, is less easily digested and assimilated by the organism than the living milk, and therefore it has not the same strengthening and reparative properties.

In the territory under his observation, there were, Séjournet states, 302 deaths in the course of four years in a population of 4000, the number of infants dying in their first year being 57. Of these infants, 33.3 per cent. were nourished by the breast, while 66.7 per cent. had either been weaned, or had been brought up from the first by the bottle: he says that this difference would be still more striking if the infants in the first class had all been kept exclusively on their mothers' milk—that is, the mortality would have been much less than 33.3 per cent. The author shows from further statistics the greatly less mortality of infants at the breast than that of infants at the bottle, in various diseases, such as measles and broncho-pulmonary maladies.

The lesson which he seeks to inculcate is the importance of mothers' nursing their infants, and he believes it should be urged on them by physicians.

The plain truth of the observations of Séjournet, confirming those of others, is that the mother who can, and who will not give to her infant the nourishment nature provides and designs for it, runs the risk of being guilty of infanticide. Pliny, who was not surpassed by Paley in his faith in final causes, said that a woman's breasts were placed upon the upper part of her chest so that she might fondle and caress her infant while it drew from them its food. Those who have studied the development of the infant mind assert that a most important stage in that development occurs during the first year of life. It is when the infant is happiest in satisfying its hunger with nature's food, that the best, the gentlest moral influences flow in upon it, and the fashioning of its spiritual nature in beauty and virtue begin. Finally, the physician urging natural nursing, pleads the lessened morbility and mortality of infants thus nourished, thereby adding this argument to that derived from natural instinct, to that of caressing, and maternal love, and to that of maternal duty in the proper unfolding of the infant mind.

PHOSPHIDE OF ZINC IN DYSMENORRHŒA AND STERILITY.

IN Matthews Duncan's lectures on *Sterility in Woman*, he places dysmenorrhœa in the list of the best demonstrated sources of, or attendants on, such

conditions. But, even if we consider dysmenorrhœa the cause of the sterility, the question of the treatment of the menstrual difficulty does not in many cases admit of ready answer. Certainly there are cases of dysmenorrhœa which may be rapidly and satisfactorily treated by dilating the cervical canal, this dilatation being by double-bladed dilators, rather than by other means. But there remains a large number of cases that present no indication for this method of treatment, and which, of course, are not benefited if it be tried. Now, some of these may possibly be cured by the use of phosphide of zinc, as recommended by Decoux in a recent number of the *Gazette des Hôpitaux*. Having found this medicine useful in many cases of dysmenorrhœa and of amenorrhœa, DECOUX narrates a case where it twice proved effective in curing sterility associated with the former disorder. In addition to the success of this medicine in dysmenorrhœa, amenorrhœa, and sterility, he has found it remarkably useful in cases of hysteria, ataxia, anæmia, and neuralgia. He gives two granules of four milligrammes each, morning and evening. Only the crystallized preparation should be used, as the powder is inert. He states that its preparation is so difficult that, with a single exception, one scarcely find in commerce any but an impure product, which is partly or completely ineffective.

PUNISHMENT IN KIND.

AN ideal justice has proposed that all crimes should have such punishment as corresponds with their nature. Thus, he who commits murder has his life taken as a forfeit by law; he who steals, must restore the stolen money, and likewise be punished by a fine; he who inflicts bodily injury must have similar injury done himself. Human laws do in some cases, as in that of murder, recognize this principle. But the principle may be carried too far, as happened with the judge who was guided by it in his decision as to the punishment for causing a miscarriage: A careless hodman, ascending a ladder, let part of his load fall upon a pregnant woman who was passing on the pavement, and as a consequence of the injury she miscarried, when the judge to whom the matter was referred by the indignant husband, decided that the hodman must place the unfortunate woman in the condition she was at the time of the accident. Probably the decision was not enforced, and in this respect there was a miscarriage of justice.

But occasionally punishment in kind is very justly inflicted without the intervention of law. A very striking illustration in point is given in one of the recently published lectures by Martineau, *sur la Blenorrhagia chez la Femme*. The story is this: A Parisian husband gave his wife gonorrhœa, and she *kept it for him* during more than two years! He was cured of the disease, but at more or less frequent intervals after coition with her, had fresh attacks, although she was supposed to have also been cured. Martineau, upon examining the lady, found there were two or three urethral and periurethral follicles projecting and purulent, that the vulval follicles near the opening of the excretory duct of the right vulvo-vaginal gland were also inflamed, as well as the gland itself, and that there was a sero-purulent urethral discharge.

No one can question the justice of the punishment for the husband's original sin. Unfortunately the moral of the story is in part spoiled by the statement that this man had intercourse with other women without contracting gonorrhœa, during the time his wife was so sure to give it to him under similar circumstances.

REVIEWS.

ON SCLEROSIS OF THE SPINAL CORD, INCLUDING LOCOMOTOR ATAXIA, ETC. By JULIUS ALTHAUS, M.D., M.R.C.P. Lond. New York: G. P. Putnam's Sons, 1885.

IN no department of medicine has such satisfactory progress been made of late years as in the diseases of the cord, and the number of excellent manuals which have been issued recently bears testimony to the general interest which the profession now takes in the subject. Dr. Althaus, who is a well-known London specialist of large experience, has chosen for consideration in this volume those diseases of the cord accompanied by sclerosis or chronic degeneration, and which include in reality the majority of cases of spinal disease commonly met with. Locomotor ataxia occupies three-fourths of the work, and is most exhaustively discussed in all its relations. Indeed, this part forms a complete monograph on the subject. The author is a strong supporter of the theory of the syphilitic origin of tabes, and in over 86 per cent. of his cases a specific history could be obtained. Certainly, so far as statistics go, the conclusion would seem to be warranted, and yet the dissimilarity of the lesions and the uselessness of special treatment outweigh in the minds of many authorities, such as Leyden and Westphal, any number of figures which may be "made to prove anything." Nearly 150 pages are devoted to the symptomatology of the disease, and many illustrative cases are given. In the treatment of tabes, Dr. Althaus, as is well known, holds much more hopeful views than most writers on the subject. Believing so strongly in the etiological relation of syphilis to this truly dreadful disease, he pleads earnestly with the general practitioner to be more alert in the prevention of it by thoroughly treating all cases of primary syphilis. Where there is a suspicion of this disease, a prolonged course of mercury and iodide of potassium is advised, and in the early pre-ataxic stage the progress of the disease appears to have been arrested. In the second and third stages not much can be expected from them, and the author then prefers ergot and nitrate of silver. Opinions differ much as to the value of the latter salt, but the author speaks in most favorable terms of

its use, particularly in allaying the pains. Discoloration is not produced until 450 grains have been taken (Krahmer), so that the drug should be stopped when the amount reaches about 300 grains.

We are glad to see that Dr. Althaus uses the term "Westphal's symptom," in speaking of the knee-jerk. The name of this able and modest[1] investigator should certainly be connected with the discovery of a symptom of such great value in diagnosis.

The chapters on spastic paralysis, Friedreich's disease, and insular sclerosis are equally interesting and full of valuable information.

SOCIETY PROCEEDINGS.

THE AMERICAN DERMATOLOGICAL ASSOCIATION.

Ninth Annual Meeting, held at the Indian Harbor Hotel, Greenwich, Conn., August 26, 27, and 28, 1885.

WEDNESDAY, AUGUST 26TH.

MORNING SESSION.

THE meeting was called to order at 10 o'clock by THE PRESIDENT, DR. W. A. HARDAWAY, of St. Louis.

The first paper was read by DR. J. E. GRAHAM, of Toronto, Canada. It was entitled

A CASE OF TUBERCULO-ULCERATIVE SYPHILIDE OF HEREDITARY ORIGIN.

The patient was a girl twenty years of age. On the right arm, from the wrist to the elbow, there was very little healthy skin, there being little but cicatricial tissue. The skin of the forearm presented elevations and depressions and in places was covered with thin scales. The hand was not involved and the affection did not extend deeper than the subcutaneous areolar tissue. For three or four inches above the elbow, the arm was atrophied and covered with cicatricial tissue. At the upper border of the cicatricial tissue, was an ulcer three-fourths of an inch wide, which encircled the arm. Above this there was sound tissue, no nodules were present. The left clavicle presented, about its middle, a swelling and ulceration about the size of a silver dollar; the result of a blow. There was no copper-colored appearance. The heart and lungs were healthy and the urine normal. Investigation of the family history showed that the mother was apparently healthy, and the patient's sisters, three in number, all younger than herself, were healthy. The father died of pneumonia when the patient was eighteen months old; it was subsequently learned (after the patient had been under treatment for some time) that he had also had syphilitic ulceration of the throat. The treatment consisted in the local application of a mild mercural ointment and the internal use of corrosive sublimate and iodide of potassium. The condition steadily improved and in the course of six or eight weeks the ulceration had healed. Since that time the patient had not been under observation.

The speaker referred to the difficulties of diagnosis in this case, as there was, at first, a complete absence of specific history, the facts in regard to the father not being learned for some time after the case had been under treatment, and as there had been no previous evidence of hereditary syphilis; but taking all the facts into consideration, he thought that there could be no doubt as to the correctness of his diagnosis.

Photographs of the case were exhibited.

DR. R. W. TAYLOR, of New York, said that there are a number of important points brought up by this paper. First as regards the family history. The mother was healthy, but the father had syphilis. It is now generally conceded that syphilis can be communicated to the child without infection of the mother, and he believed that he was the first in this country to call attention to this fact. He has seen this a number of times and it has been in cases in which a most careful and thorough examination of the mother had been made and the observations continued over a series of years. Dr. Graham stated that he could obtain no history of early manifestations of hereditary syphilis. This is not uncommon, but Dr. Taylor believes that there is usually some indication of specific taint, but it may be so slight as not to excite notice or its exact import is not recognized. These may pass away and in the course of six months or a year, the ulcerative lesions appear, although it is not uncommon for the child to go to the age of from six to eighteen years without exhibiting this condition. He has reported the case of a girl whose mother had syphilis who had exhibited no signs of hereditary disease during her early years. When about fifteen years of age, she had, following a cold bath, the development of ulcerative gummatous tumors scattered over the entire body. A factor which has some importance in the time of appearance of these lesions is traumatism, as he has frequently noticed such instances.

DR. C. HEITZMANN, of New York, said that every one has seen cases similar to the one reported. He has seen such cases in which he was unable to determine at first sight the nature of the affection. The diagnosis lies between syphilis and scrofula. Lately a man aged twenty came to him with a condition similar to that described by Dr. Graham, affecting the right groin. The ulcer was ten inches in diameter. He was unable at first to make the diagnosis.

DR. GREENOUGH, of Boston, referred to the practical point to which Dr. Taylor has called attention, and that is the possibility of the father's infecting his progeny, without the mother showing any signs of syphilis. Within the past two months, he had seen a woman who has lost three children in succession from hereditary syphilis, yet she is strong and apparently perfectly healthy and has never shown any signs of the disease. This woman has been under competent medical observation for six or seven years.

DR. J. C. WHITE, of Boston, thought that in many of these cases it is impossible to make the diagnosis at once.

DR. L. A. DUHRING, of Philadelphia, said that there are certain cases in which it is almost impossible to express a positive diagnosis at first. The result of treatment in causing a rapid cure in the case described would certainly incline him to the opinion that this was a case of syphilitic disease. He has, however, never seen a case recover so quickly.

[1] We say "modest," for this characteristic struck the writer very forcibly when attending Westphal's Lectures on Diseases of the Spinal Cord. In an able discussion on the value of the knee-jerk, not a word was said of his own connection with the important discovery.

DR. J. NEVINS HYDE, of Chicago, said that, as regards the remarks of Dr. Taylor, he would say that he has seen cases which have convinced him that, whilst it is not the rule, still occasionally syphilitic children are born where, so far as observation can be made, no evidence of syphilis in the mother can be detected. As far as the general health is concerned, he cannot say that he has seen vigorous, healthy women the mothers of syphilitic children. Such mothers are usually pallid and weak, although there may be no symptoms which can be ascribed to syphilis. He sees inherited syphilis in infants constantly, but he has never seen inherited syphilis manifest itself in advanced years, or, if he has, he has failed to make the proper diagnosis. Tardy inherited syphilis he knows nothing about. The more he sees of syphilis, the more he is satisfied that in its origin heredity does not amount to very much. The accidental cases of syphilis are very common. He has seen the initial lesion of syphilis on the head of a penis where it was without doubt due to inoculation from the finger of the surgeon in catheterization. He has no doubt that the case described was one of syphilitic trouble, and, as Dr. Duhring has said, the result of treatment unquestionably points in that direction. There are no cases which yield so readily as old cases of untreated syphilis. As to pronouncing it a case of hereditary syphilis, his experience would not permit him to do so.

DR. W. A. HARDAWAY, of St. Louis, thought it unwise to base our diagnosis on the results of internal treatment. Because a case gets well under antisyphilitic treatment, is not proof that the affection is syphilitic in its nature. Local treatment alone will often produce that result.

DR. R. W. TAYLOR, of New York, remarked that Dr. Hyde had made the statement that these women apparently unsyphilitic, who have borne syphilitic children have, in his experience, been pallid and weak. He entirely disagrees with him on this point. More frequently he finds such persons in robust health.

The next paper was entitled

CLINICAL NOTES ON PSORIASIS,

by DR. F. B. GREENOUGH, of Boston.

The paper was ounded on the records of 394 cases of psoriasis, occurring in an observation embracing about 15,000 cases of skin disease, representing about two and one-half per cent.; 206 of these cases were males and 188 females. The author's statistics were presented, showing the age at which the attack was first observed. A large proportion was first attacked with the disease between the ages of ten and forty years; one-seventh before the age of ten years; this latter observation is not in accordance with the literature of the disease. In but ninety-seven cases was the speaker able to get reliable evidence in regard to the family history; in thirty-one of these psoriasis had existed in a near relative, but in the remaining sixty-six no other member of the family, near or remote, had had the disease.

As regards locality affected, where there is much development it is almost constantly found about the elbow and knees, and more frequently on the extensor surfaces than on the flexors. A class of cases is met with in which the affection shows itself only on the skin of the leg below the knee.

Well-marked cases are readily recognized, but in some cases there is considerable difficulty in making the diagnosis. It is most frequently confounded with some form of eruption resulting from constitutional syphilis. When psoriasis affects the scalp, its appearance is often similar to that of secondary syphilis. In psoriasis, however, the patch consists simply of epithelial cells, usually on a slightly hyperæmic base; in syphilitic eruption, the crust will contain other elements than epithelial cells, and on removal of the crust spots of moisture will be detected. A characteristic symptom of psoriasis of the scalp is a band of hyperæmia, about three-fourths of an inch wide, extending around the forehead, contiguous to the hair; this is a point of value in the diagnosis between eczema capitis and psoriasis. In the former affection, this band is wanting. In eczema, also, evidence of dried serum or pus will be found; eczema is apt to extend to the ears. Psoriasis is not accompanied with enlargement of the post-cervical glands, as is eczema. The diagnosis from favus is made by the age of the patient, a moist surface beneath the crust, the evidences of destruction of the hair follicles, and in favus the microscopical examination.

The speaker had never been able to satisfy himself that psoriasis of the scalp ever caused permanent loss of the hair.

On the general integument, syphilide are most apt to resemble psoriasis. The regions on which the eruptions appear are important. The syphilides are apt to affect the flexor surfaces, while psoriasis affects more commonly the extensor aspects. Psoriasis begins as a minute point of hyperæmia, which may last for several days. In macular syphilide a crop of macules appears within twenty-four or forty-eight hours, and then the eruption begins to fade. There is in syphilis a decided pigmentary change. In squamous syphilis, the epithelial scales differ from those of psoriasis.

The amount of pruritus complained of in psoriasis varies, but it is rarely a prominent symptom, although in exceptional cases it may be severe. He has never seen any eruption on the palms or soles resembling psoriasis, with the exception of eczema, which was not syphilitic.

In regard to treatment, some cases do well, while others do not. There is no specific; what will benefit one case may make another worse. In his experience, tarry preparations, especially the oil of cade, have been most efficacious. Great comfort may be afforded by the use of emollients, of which cod-liver oil is one of the best. Cod-liver oil and oil of cade (equal parts) is a common prescription. Chrysarobin is a powerful remedy, but has the disadvantage of soiling the clothing; moreover, on the face and scalp it is apt to produce violent dermatitis. The internal administration of arsenic in some cases is of benefit. Even after apparent recovery, there is great danger of relapse.

DR. HYDE asked whether any of these cases had the eruption on the palms of the hands.

DR. GREENOUGH replied that in none of the cases mentioned was that observed.

DR. HYDE thought that it would be well to drop the

idea that psoriasis may occur on the palms of the hands exclusively. In all the cases in which such appeared to be the case, he has been able to make another diagnosis. He has observed one or two cases of psoriasis of the head in individuals bald on the top, and in these instances the eruption confined itself to the portions covered with hair.

DR. L. A. DUHRING remarked that the reader of the paper, in referring to the diagnosis, did not allude to the difficulty sometimes experienced in diagnosticating seborrhœa capitis from psoriasis. He has found considerable trouble in the diagnosis, particularly in young girls. In these cases the eruption was confined to the scalp.

DR. A. R. ROBINSON, of New York, said, in regard to the diagnosis of favus and psoriasis, that there is usually no difficulty. He did not agree with the author in regard to one of his points of diagnosis. In the early stage of favus you do not find moisture when the crust is removed; there is a shiny appearance, and, in advanced stages, ulceration is present. He agreed with the speaker that psoriasis always occurs in small spots of hyperæmia at first, not covered with scales. He considered it primarily an affection of the rete. While it is true that psoriasis often disappears without producing pigmentation, as stated by the author, yet there may be discoloration found on the lower extremities, particularly where there is a varicose condition of the veins. In some cases where there are only a few patches of psoriasis limited to the lower extremities, it is often difficult to make the diagnosis; unless there is involvement of other parts of the body, or you have the history, it is often impossible to come to a conclusion. There are other cases, of acute psoriasis, which closely resemble acute eczema. In reference to the palms of the hands, whilst we do not see cases of psoriasis limited to this situation, yet he is sure that cases have been shown in which the palms of the hands have been affected in connection with other portions of the body.

DR. J. C. WHITE, of Boston, concurred with Dr. Duhring in regard to the difficulty of diagnosticating between psoriasis of the scalp and seborrhœa. In some cases the diagnosis cannot be made for months. In diagnosis, he does not lay much stress on the location of the eruption; when the eruption is sparse, it is more apt to affect the extensor surfaces. He should like to call attention to one termination which he has seen in three cases, as he has elsewhere given in detail, and that is a degeneration into epithelioma.

DR. R. B. MORISON, of Baltimore, said that he saw a great many cases of psoriasis in the white; but, although in dispensaries he has had many negroes under treatment, he can only recall one or two cases of psoriasis in persons of that race; in such cases there is a loss of pigment.

DR. G. H. FOX, of New York, said that too much stress is laid on the general rule that psoriasis occurs most frequently on the extensor surfaces, the knees, and the elbows. It is a notable fact that in general psoriasis the vicinity of the knee and elbow escapes. Many cases of psoriasis occur in weakly subjects; while, on the other hand, many cases appear in robust persons. In every individual case, the better the patient's health, the less likely is he to suffer from a recurrence of the affection. He has been very successful in the treatment of psoriasis, and in its management he adopts the teaching of the late Tilbury Fox. He laid stress on the point that in psoriasis, as in other inflammatory affections of the skin, and also in lupus, the first thing to do is to lessen the congestion of the skin. He does not do this by adopting the alkaline treatment, but by restricting the diet. He is somewhat indifferent as to restricting the starchy and saccharine elements of the food, but cuts off the meat, and orders a diet of fruits and vegetables in the summer, and in the winter gives a carefully restricted diet. Tea, coffee, tobacco, and stimulants of all kinds are to be cut off. By so doing, more will be accomplished than is obtained by using arsenic and local applications at the start.

In regard to local remedies, he never uses tar in the treatment of psoriasis. With the application of chrysarobin made at the proper time, there is no necessity for the use of tar. He has seen many cases in which this drug did no good, but this was because the application was made when the patches of psoriasis were in a congested condition. If the acute congestion is at first lessened, chrysarobin will produce beneficial results.

DR. C. HEITZMANN, of New York, said that one of the most important points, after making the diagnosis, is to decide as to the acuteness or chronicity of the affection. If it is acute, local applications are to be avoided; if the case is chronic, chrysarobin may be used with advantage, at least temporarily. It is not a cure. He agreed with Dr. Fox, that restriction of the diet is important for the purpose of lessening the congestion. Tar cannot be dispensed with. Chrysarobin removes the disease for a time, but in a few months it returns. There is nothing like tar to prevent the recurrence. No mention has been made of pyrogallic acid, which does good in some cases. There are, however, some cases which cannot be treated successfully with any remedies, the disease steadily growing worse.

DR. W. A. HARDAWAY believed that in psoriasis we have a disease situated in the skin itself. It is frequently hereditary. The same sort of skin may be transmitted just as a certain color of the hair or of eye may be transmitted, and then any exciting cause may develop the psoriasis. Traumatism is frequently the exciting cause. He has seen psoriasis follow eczema. It is not unlikely that seborrhœa of the scalp may lead to the development of psoriasis. Internal causes may produce it. He has seen a case in which, apparently, the excessive use of oatmeal produced typical psoriasis.

In the treatment of psoriasis, it is important to regulate the diet. He cuts off meats and aids digestion in all possible ways. As a local application, he believes that chrysarobin with salicylic acid is very useful in chronic cases. Arsenic is useful on account of its action on the skin. He has employed chrysarobin in liquor gutta-percha, and in gelatine paste. This treatment may be followed up by the application of sulphur ointment. In psoriasis of the scalp, sulphur is quite an efficient remedy.

DR. GREENOUGH said that he did not intend to cover the entire ground of psoriasis in his paper. The omission of a consideration of seborrhœa, he admitted, was an oversight. In regard to pigmentation, he referred especially to those cases of psoriasis of the trunk which were most apt to be confounded with syphilides.

DR. J. C. WHITE, of Boston, reported two

CASES OF ANGIOMA PIGMENTOSUM ET ATROPHICUM.

The first patient was a young man 17 years old, and a Russian Pole by birth. Freckles appeared on his face before he was two years of age. These increased in number until the age of six. When the telangiectasic condition first appeared was not noted. When seen, the patient was well developed and apparently in good health. He has, however, grown slowly, and is now no larger than a boy of twelve. The hair of the head is abundant and intensely black. The eyes are also black.

Present condition. Melanosis: The forehead and lower portion of the face are of a dark-brown color, and, on close inspection, small spots of a darker color are seen. The whole trunk is as dark as the skin of a dark Spaniard. The scrotum is very black, and the penis and glans present dark spots. The arms and hands are thickly spotted. The legs are also affected. On the right thigh there is one spot of dark color, covered with rather long hair. The mucous membrane of the mouth and pharynx is free from melanosis.

The atrophied condition: On the right side of the face, occupying one-half the surface, is a sharply defined area of white cicatricial looking skin. Similar areas are seen on the other cheek, forehead, and about the mouth. A few white spots are seen on other portions of the body. The sensibility of the affected areas is decidedly lessened.

Telangiectasis: Over parts of the face there are bright red spots, varying in size from a pinhead to a pea. They are most noticeable in the atrophied portions. Within the eyelids there are two angiomatous new growths. Several vascular twigs are also seen on the face. A few red points are found on the femoral surface.

The second case is a brother of Case I., aged three years, born in New York. When eighteen months old, little colored freckles were noticed on the face. Since then the condition has been increasing. His hair is dark brown and eyes are black. The face is covered with numerous dark brown freckles. The spots are so close together that at a little distance the skin has a uniform color; in some places the spots are slightly elevated; the backs of the hands are covered with dark brown spots; elsewhere the skin is clear. There are no leucodermic spots, and no angiomatous condition.

From a study of these cases, Dr. White concludes that in the beginning the development of these spots cannot be distinguished from ordinary freckles. Gradually the spots multiply until they involve a considerable portion of the skin. It is probable that several years may elapse without other manifestations of the disease. The telangiectasic condition is probably secondary. In the first case it is most developed in the atrophic portion. It is probable that in this case there will be hypertrophy of the epithelium and final transformation into epithelioma. This has been the result in the thirty-three cases which have been reported.

DR. TAYLOR thought that there was a direct relation between the red spots and the macules. The history of the cases which he has seen have been first a rash, then the red spots, and then the macules. In one case the telangiectasis followed exposure to heat.

DR. WHITE recognized a great difference in this disease as described by various writers, but he insisted on the correctness of his own observations. The younger child has exhibited none of the precedent hyperæmia which has been noted in some cases. This patient has been observed after exertion, and when exposed to intense heat, but there has been no hyperæmia. The same is true of the first case as far as known. In the second case, which is still developing, there is no enlargement of the vessels.

EVENING SESSION.

DR. J. NEVINS HYDE, of Chicago, read a paper on

THE RELATIONS OF LUPUS VULGARIS TO TUBERCULOSIS.

He began with a detailed statement of all the cases of lupus reported to the Statistical Committee of the American Dermatological Association during the last seven years, and compared the frequency of the disease in this country with that reported in the Vienna hospitals. He then gave details of twenty consecutive cases observed by him in Chicago.

The clinical deductions from these records were then added, showing, according to the author, that there was a remarkable absence of pulmonary tuberculosis, scrofula, and allied diseases in the family histories of the twenty cases reported.

The teachings of the two schools represented in the past by prominent German and French authors were then referred to, and finally the later investigations demonstrating that lupus vulgaris was the result of bacillus infection, not to be differentiated in external appearance of the parasite from the bacillus tuberculosis.

The following clinical facts were then cited in support of the later teaching of this subject as bearing on the vital point in the author's argument, viz., that lupus vulgaris is not the result, as has long been taught, of tuberculosis or other systemic diathesis, but is the product of a local infection by bacilli, entirely unassociated with any constitutional evidence of diathesis or predisposition.

1. The unimpeachable character of the family record in by far the larger number of cases of lupus vulgaris.

2. The fact that the disease is in its inception a disorder of the period of childhood, when, for the most part, the habits of the child are favorable to infection.

3. The several sites of predilection are those most favorable to such infection.

4. The failure of the disease to spread by inheritance.

5. The remarkable tendency of lupus vulgaris to cutaneous limitation.

DR. JAMES C. WHITE, of Boston, then read a paper on

THE TREATMENT OF LUPUS BY PARASITICIDES.

He reviewed briefly the evidence in favor of the parasitic nature of the affection. All previous plans of treatment which had proven most successful were those which would have the effect of destroying the parasite which might be present.

A number of cases were then reported in which the local use of corrosive sublimate in the strength of one to two grains to the ounce of water or unguent had been used with beneficial results. The ointment was especially

recommended. It had been rarely necessary to prolong treatment over two months. As regards the permanency of the cure, the author was unable to speak, as the experiments had been continued for only eighteen months.

DR. SHERWELL, of Brooklyn, expressed his profound disbelief in the parasitic nature of the disease, and he did not know that the theories of Koch have been entirely proved. It seems to him that lupus and scrofula represent forms of syphilitic hereditary influence.

DR. WIGGLESWORTH, of Boston, suggested that the oleate of mercury might be more efficient than ointments, on account of its penetrating power.

DR. HYDE said that at the last meeting of the Association, Dr. Taylor suggested the use of a solution of corrosive sublimate in tincture of benzoin for ringworm. He had used this in cases of lupus and in cases of infecting chancre. It makes an excellent application. In regard to the syphilitic origin of this affection (lupus), he said that he recognized the fact that inherited syphilis is inherited syphilis and has no relation to this or other diseases. He felt that he was standing on good ground when he said that scrofula and lupus have no relationship whatever with syphilis.

The next paper was by DR. W. A. HARDAWAY, of St. Louis, and was on

THE TREATMENT OF PORT-WINE MARK BY ELECTROLYSIS.

The author stated that in the treatment of this affection, the object is to excite sufficient inflammation to cause occlusion of the vessels. Electrolysis seems to be the most convenient way of doing this. At first the speaker had used a bundle of needles, but after the use of such, the reaction is too violent, and there is, moreover, a great tendency to keloidal development, so that he now employed only the single needle. It is important to allow a period of some weeks to elapse between the operations. The histories of three cases were given in which this method had been employed, in two of which with marked success, in the third the result was unsatisfactory.

DR. WHITE used this method in one case, and had produced considerable improvement.

DR. WIGGLESWORTH had seen good results in telangiectases from cutting the vessels in two places and using a preparation of iron, thus closing up the dilated vessels. The worst case of telangiectasis that he had ever seen occurred in a middle-aged lady whose face, in consequence of the disease, was bright red in color. He treated her for three or four years with a marvellously good result.

DR. FOX said that we all admit that spider cancers and telangiectasis are amenable to treatment of different kinds, but when we come to port-wine marks, we find a difference. He thought that better results can be obtained by electrolysis than by other measures, but it does not remove the trouble entirely. He has used the treatment with puncture and carbolic acid with fair results. In one or two cases he has passed the electrolytic needle deeply into the tissues, endeavoring to strike the artery of supply, and sometimes has produced a decided effect.

DR. DENSLOW, of St. Paul, recently saw a case of port-wine mark on the labia majora of an infant. This had ulcerated when the child was brought to him. As a temporary measure, he applied the liquor gutta-percha. In two days, without other treatment, the whole mark sloughed out, leaving nothing but a simple ulcer, which completely healed in the course of three weeks.

DR. WHITE said that the course in the case mentioned by Dr. Denslow is not an uncommon one in infants.

DR. HARDAWAY held that the advantage of the electrolysis is that it is manageable. A practical point might be referred to, and that is, if after the operation the part be frequently mopped with hot water, the inflammatory disturbance will be greatly lessened.

DR. S. SHERWELL, of Brooklyn, made some

REMARKS ON A MOOTED POINT IN THE ETIOLOGY OF PSORIASIS.

He had been struck by the great diversity of opinion in regard to the general health of those affected with psoriasis, and, in order to arrive at something like a consensus of opinion on the subject, he had referred to the writings of most of the authorities in dermatological matters. Brief extracts from various writers were then given. The evidence thus obtained strengthened the Doctor's opinion that patients with psoriasis are generally in good health. He thought that the theory of Piffard, who believes that the rheumatic diathesis is a great exciting cause of psoriasis, was the most rational theory that had been advanced.

THURSDAY, AUGUST 27TH.

MORNING SESSION.

At the Business Meeting, the following were elected

OFFICERS FOR THE ENSUING YEAR:

President.—Dr. E. Wigglesworth, of Boston.

Vice-Presidents.—Dr. I. E. Atkinson, of Baltimore, and Dr. A. R. Robinson, of New York.

Secretary.—Dr. G. H. Tilden, of Boston.

Treasurer.—Dr. H. W. Stelwagon, of Philadelphia.

Dr. F. B. Bronson, of New York, was elected to membership.

The next meeting will be held, beginning on the last Wednesday of August, 1886, at Indian Harbor Hotel, Greenwich, Conn.

The Committee on Statistics made a brief report.

DR. G. H. FOX gave a brief description of

TWO CASES OF DYSIDROSIS.

The first case, for want of a better term, he classed under this heading. The patient was twenty-nine years of age, and had always perspired freely. Four years ago the eruption began on the palms of the hand, and had persisted. The soles of the feet had also been affected at one time. The skin of the hands was decidedly thick and had a dark hue, and was dotted with numerous elevations of epidermis, averaging in size that of a hemp-seed. The patient had never seen any moisture in connection with the disease. There had been no itching. The skin never peeled off. Puncture with a needle revealed no serum or fluid of any kind.

The second case was that of a woman aged 46, a cook, whose general health was good. The present trouble began five years ago. The eruption is on the face and consists of numerous large and small vesicles containing clear fluid.

DR. ROBINSON said that these latter cases are not infrequent and may persist for months and years. They consist in destruction of the sweat ducts in the chorion. They never become inflammatory, although sometimes they may be surrounded by a little areola as the result of pressure. The symptoms which they present do not at all correspond to those of dysidrosis as described by Hutchinson and Tilbury Fox, as belonging to dysidrosis of the palms.

DR. STELWAGON said that, judging from his own experience of the past several years, the affection, as described in Dr. Fox's second case, is not at all uncommon, observed especially in washerwomen and cooks. At first he was unable to classify the disease, resembling as it does dysidrosis, but has lately looked upon the affection as sudamen. The only description of the disease that he has been able to find occurs under the head of that disease in Dr. Robinson's treatise on skin diseases.

DR. A. R. ROBINSON, of New York, presented a paper on

MYCOLOGICAL STUDIES IN TINEA FAVOSA AND TINEA TRICOPHYTINA.

The epidermis of different individuals, he said, differs in susceptibility to these parasites. Children are more apt to suffer with tinea tricophytina and favus, while adults more frequently presented tinea versicolor. All children are not equally susceptible. In many cases of parasitic disease there is impaired vitality previous to the development of the affection.

He then gave an account of his investigations to determine the exact anatomical seat of the parasitic diseases in question and to determine the changes which they produced in surrounding tissues. The conclusion was that in favus the rete is not affected until the later stages, when as a result of pressure the rete and corium are atrophied or ulcerated. The parasite confines itself more particularly to the corneous layer. The parasite of tinea tricophytina in some cases passes down into the rete, while in others it does not.

A number of sections were shown under the microscope which illustrated the points brought out in the paper.

DR. WHITE asked what evidence there was that in ringworm and favus a decreased vitality is necessary.

DR. ROBINSON thought that it was found in the fact that it is exceedingly difficult to cure these affections occurring in broken-down subjects, until the general health is improved.

DR. WHITE asked if there is any evidence that the fungus attaches itself more readily, or runs a more rapid course in unhealthy children?

DR. ROBINSON replied that practical experience shows that it is well known that in hospitals the disease will spread more rapidly than in private families.

DR. WHITE could not agree with the speaker in the importance of depressed general health as a factor in the production of these diseases. He has never seen any necessity for internal treatment in these cases. Where the disease affects a superficial portion of the body it is readily removed, but where it involves a portion covered with hair it is difficult to cure. Although he thinks the improvement of the general condition has nothing to do with the cure of the parasitic trouble, yet it is of service in the restoration of the parts to their natural condition after the parasite has been destroyed.

DR. PIFFARD, of New York, agreed with Dr. Robinson that there is a relation between the condition of the general system and the rapidity of development and rapidity of cure.

DR. DUHRING has always held the view that a peculiar condition of the epidermis was necessary for the growth of the fungus. The majority of cases of obstinate ringworm that he has seen, have been in individuals in poor health, but there are exceptions to this rule. What this peculiar condition of the skin is, has not been determined.

DR. HEITZMANN said that as regards the constitution of the patient, he must agree with Dr. White. He had seen in the Vienna clinic strong healthy persons covered from head to foot with tinea.

DR. DENSLOW had recently seen a large number of cases of ringworm of the head and beard, but all the patients were well-developed muscular subjects. These were cured without internal treatment.

DR. HEITZMANN, of New York, then read a paper on

THE STRUCTURE OF THE DERMA AND THE DEVELOPMENT OF ELASTIC TISSUE IN IT.

He based upon his orignal investigation a claim that the bundles which compose the derma by freely interlacing, are not made up of fibres, but of dense, delicate spindles, representing the basis-substance. Between the spindles is a chemically different cement-substance. The interstices between the bundles are occupied by protoplasm, everywhere connected and nowhere in the shape of the so-called connective-tissue cells. According to the general spindle-shaped configuration of the bundles the protoplasmic cords produce a comparatively coarse reticulum, freely supplied with nuclei. In connection with the protoplasm there is a delicate reticulum of living matter, piercing both the basis- and the cement-substance. The non-living portions are very minute, while the main bulk of the derma has all properties of life, as shown by feeding kids with milk and grass, which latter very rapidly alters the density of the derma. In inflammation not only the protoplasm participates in an active manner by new formation of inflammatory corpuscles, but the whole basis-substance breaks apart into such corpuscles. With advancing age the protoplasm becomes less, being transformed into basis-substance, the bulk of which is augmented. At the meeting-edges of the bundles the protoplasm is transformed into elastic substance, the third variety of basis-substance in the derma. Still the branching elastic ledges remain, traversed by delicate offshoots of living matter. In this view the best microscopist of Europe, Prof. Stricker, of Vienna, coincides with the speaker.

DR. W. A. HARDAWAY described

A CASE OF MULTIPLE MYOMATA OF THE SKIN, ACCOMPANIED BY SEVERE PAIN.

A. B., age, 36, married, with healthy children and good family history. Never had syphilis. Present trouble began a year ago. Changes in weather produced pains in the parts which have since become affected; to relieve these firm pressure was made with the hand. Later the lesions presented themselves.

Present condition: A strong hearty man, a peddler

by occupation. The pains still persist, recurring at intervals of one night to a week. Each attack lasts two or three minutes and does not return the same night.

The growth is situated on the right side of the back in the middorsal region, and the course of the growths is obliquely outwards. There are one or two elevations on the left side, three of the growths are as large as peas, others are small. The epidermis is not abnormal. On passing the hand over these growths there is no hyperæsthesia, but on deep pressure in the neighborhood of the larger masses the patient sinks moaning to the floor. One of the larger growths was removed and microscopical examination showed it to be composed of smooth muscular fibre.

From a clinical standpoint, the case bears a close relation to the cases of neuroma which have been reported. The speaker concluded that certain new growths in the skin accompanied with severe pain may be widely different in histological structure. We are not justified in assuming, that a painful tumor of the skin is a neuroma or fibro-neuroma simply from its clinical history, without a microscopical examination.

DR. DUHRING said that it would be difficult to differentiate from the local appearances, the case described by Dr. Hardaway and that which he reported some years ago. It is not possible from a clinical standpoint, as has been said, to differentiate these growths; we are obliged to rely on the microscope. There is one point of difference in his case and that just described: no pain was produced by superficial manipulations, while in his case the pain was intense on the slightest touch, while firm pressure decreased the pain.

DR. R. B. MORISON, of Baltimore, reported

AN UNUSUAL CASE OF TYLOSIS OF THE HANDS.

The patient was a negro, aged 32, muscular, well developed, and apparently healthy. By occupation he was a fireman of a steamer, and had occupied this position for ten years, shovelling coal, with the right hand grasping the upper portion of the shovel, and the left hand sliding up and down the handle. Two fingers of the left hand are worn off to the second joint, while the other two are going in the same way, the nails having disappeared. On several occasions he has drawn pieces of bone from the fingers. There has been no pain at all connected with the affection. On this hand there are some large blisters, underneath which there are red granulating surfaces, which are painless. There is no history nor evidence of syphilis. Specific treatment has been used without effect. The man obstinately refuses to give up his work so that little could be done in the way of treatment.

DR. WHITE said that from the unusual result, it would seem that there must have been some precedent change causing atrophy.

DR. TILDEN remarked that there is a good deal of resemblance between this case and the cases of perforating ulcer of the foot, and this would lead us to suspect a nervous element.

DR. WIGGLESWORTH said that this resembles in some respects anæsthetic leprosy, but it differs in other points.

DR. MORISON was led to consider it a strictly local affection, from the fact that the hand which was most exposed to rubbing and to the heat of the furnace, was the one most affected.

DR. DUHRING should be inclined to consider the callosities a secondary condition. The occupation probably had something to do with the aggravation of the disease. But if the occupation had been different, there would probably have been a similar change. He should regard it as dependent on some deep change in connection with the nerves, similar to that occurring in perforating ulcer of the foot.

DR. MORISON said that it was an affection of the nerve in the first place he can hardly admit. It may be that the continued congestion of the skin, dependent on his occupation, produced changes in the nerves or other part, which culminated in this affection. In referring to the literature of the subject, he found similar cases attributed to mechanical irritation.

NEWS ITEMS.

THE REPORT OF THE ACADEMY OF MEDICINE OF MADRID ON DR. FERRÁN'S SYSTEM.—The Sanitary Commission of Germany having recently pronounced against the system of inoculation practised by Dr. Ferrán, the decision of the Academy of Medicine of Madrid with reference to the same, is a matter of interest. Subjoined is the text of their conclusions.

The Academy agrees with the Commission which went to Valencia to investigate Ferrán's methods:

1. That the epidemic which commenced in the eastern provinces, and which afterwards extended to other provinces, is positively Asiatic cholera.

2. With respect to the controversy whether the epidemic is more contagious than infectious, as the Commission affirmed, or if it be infectious and not contagious, as mentioned by Señor Don Martin, in his separate note, the Academy limits itself to the statement that the illness of which it treats is transmissible from the infected points to healthy ones.

3. The Academy agrees also that the inoculation material used by Ferrán contains comma-bacilli, but adds also that the strength of the inoculation material varies with its preparation, *i. e.*, an equal quantity of the fluid may contain a greater or less number of bacilli.

4. The Academy cannot admit without restriction that inoculation is inoffensive, as affirmed by the Commission; for it is impossible to say that, supposing an artificial cholera be produced, it shall not cause some risk to places not attacked, and on account of individual idiosyncrasy, decomposition of the fluids used, or from other causes, not result in the injury of the inoculated individuals.

5. The Academy not having any exact and reliable statistics, is unable to report concerning the efficacy of the process.

6. The Academy agrees with the Commission, that no sufficient reasons exist to lead them to oppose inoculations under the responsibility of Dr. Ferrán, and believes that it is well to inform the public of the doubtfulness of the scientific nature of the inoculations, and of the possible effects of the inoculation upon those who submit to it.

7. The Academy neither defends nor recommends the procedure, as long as its method is kept secret or experience does not prove its efficacy.—*Wiener med. Presse*, Aug. 9, 1885.

DR. HENRY B. SANDS has resigned the professorship of the Practice of Surgery at the College of Physicians and Surgeons. He will, however, continue his clinical work in connection with the institution.

MORE RESIGNATIONS FROM THE CONGRESS.—Dr. Alfred L. Carroll, of Albany, has declined the Vice-Presidency of the Section of Public and International Hygiene, Dr. Delavan Bloodgood, U. S. N., has declined the position of Councillor in the Section of Military and Naval Surgery and Medicine, and Dr. R. P. Lincoln, of New York, of Councillor in the Section of Laryngology.

THE SPECIAL MEETING OF THE CONGRESS COMMITTEE.—It is to be presumed that the meeting will undertake little else than the repair of damages—that is, the appointing of others to take the places of the distinguished men who have declined to take part in the present organization. That any such action will fail of its purpose seems to us unquestionable. We do not doubt, indeed, that men enough can be found who will be willing and even glad to hold official positions in a gathering that will be international only in name. But, allowing that the Committee made the best choice it could have made at Chicago, any selections that it makes now must necessarily be of inferior men, and it is doubtful even if men a grade below those first chosen would be willing to figure before the world as the recipients of appointments that had gone begging. It can scarcely be doubted, therefore, that the corps of appointees will be largely inferior to the remnants left by the recent defections. Far from having been mended, matters will then have been made worse; but, if this is to be the result, it is best that it should come promptly, that the remedy may follow the more speedily.—*New York Medical Journal.*

THE PRICE OF COCAINE.—Dr. Squibb, in *Ephemeris*, for July, 1885, in discussing the price of this hitherto high-priced drug, says:

If the cost of the process of extraction be a little over five cents a grain, the vial, label, and overweight in putting up would probably bring the cost up to six cents per grain, or a little more. Such articles are not worth making unless the profit upon them be liberal, especially until the losses in acquiring a good process be fully compensated; therefore, the salt should now bring at least ten cents per grain under the present very favorable conditions.

Under these conditions of market the writer, about June 15th, decided to reduce his price for hydrochlorate of cocaine, on July 1st, to ten cents per grain, thus getting it at once down to as low a price as it will be likely to reach in his hands, so long as the heavy tax of this country applies to alcohol and ether, and no less expensive solvents are applied.

This price, however, will certainly be low enough to enable the uses of the substance to be greatly extended.

NOTES AND QUERIES.

CASE OF PROLONGED GESTATION.

To the Editor of THE MEDICAL NEWS.

HEALTH DEPARTMENT, CITY HALL, Aug. 28, 1885.

SIR: I inclose copy (leaving out the names of parties) of a "return of a birth," received yesterday from one of our most respectable physicians, also give you a copy of his note appended, thinking it may prove of interest to some of the readers of your valuable journal, as it is certainly a very remarkable case, if all the statements are correct, and I have no reason at all to doubt them.

Very respectfully,

A. MARKS, Secretary.

RETURN OF A BIRTH TO THE OFFICE OF REGISTRAR OF VITAL STATISTICS, BOARD OF HEALTH, BALTIMORE CITY.

No. of child of mother (state whether first, second, third, etc.). Fifth.
1. Sex (state whether male or female). Female.
2. Race or color (if not of the white race). White.
3. Date of birth. Aug. 25, 1885.
4. Place of birth (street and number). 437 N. Calhoun St.
5. Full name of mother. Mary E. M.
6. Mother's maiden name. Mary E. P.
7. Mother's birthplace. Baltimore.
8. Full name of father. A. H. M.
9. Father's occupation. Trader.
10. Father's birthplace. Baltimore.

Name of medical attendant (or other person who makes this return). E. W. F., M.D.

Address. 192 N. Casey St.

Remarks.—"This is a very strange case. The mother says she has felt the movements of the child for over nine months, and has not menstruated for fourteen months." (See note appended.)

(Copy of Note.)

"Mrs. M., the mother of the child mentioned in this certificate, claims that she has felt the motion of the child for over nine months, and that she has not menstruated for fourteen months. She has been in a very critical condition for the past four months, and quite dropsical, thus obscuring her actual condition, and rendering a correct diagnosis very difficult. She was seen by quite a number of physicians, and was once taken to the Infirmary without any definite conclusion as to her condition.

"The mother of Mrs. M. confirms the statement of the daughter. The child is large (15¼ lbs.). Bones of the head firmly united at the sutures, and has the appearance of a child several months old, lifting its hand and looking around while being washed. Perhaps when I call next time I may find it toddling round the room.

"E. W. F."

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY, FROM AUGUST 25, 1885, TO AUGUST 31, 1885.

CRONKITE, H. M., *Captain and Assistant Surgeon.*—Relieved from duty at Fort Reno, Indian Territory, and assigned to duty as Post Surgeon, Fort Hays, Kansas.—*S. O. 129, Department of the Missouri*, August 26, 1885.

DAVIS, WM. B., *Captain and Assistant Surgeon.*—Having reported for orders from leave of absence, assigned to duty at Fort Porter, N. Y., as Post Surgeon.—*S. O. 183, Department of the East*, August 28, 1885.

POWELL, J. S., *Captain and Assistant Surgeon.*—Relieved from temporary duty at Fort Leavenworth, Kansas, and assigned to duty as Post Surgeon at Fort Lyon, Colorado.—*S. O. 128, Department of the Missouri*, August 25, 1885.

KANE, JOHN J., *Captain and Assistant Surgeon.*—Granted leave of absence for one month, to take effect when his services can be spared.—*S. O. 195, A. G. O.*, August 26, 1885.

EBERT, R. G. *Captain and Assistant Surgeon.*—Assigned to temporary duty with U. S. troops at Riverside Park, N. Y.—*S. O. 179, Department of the East*, August 24, 1885.

MCCAW, W. D., *First Lieutenant and Assistant Surgeon.*—Assigned to temporary duty at the camp of the troops near Kiowa, Kansas.—*S. O. 128, Department of the Missouri*, Aug. 25, 1885.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY DURING THE WEEK ENDING AUGUST 29, 1885.

WM. H. JONES, *Surgeon.*—Detached from the Wachusett, and waiting orders.